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1987

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NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

Janet Ross
RELEASE NO. 87-001

For Release
January 14, 1987

RAINES RETIRES, HARLAN NAMED SR&QA DIRECTOR

Martin L. Raines, Director of the Safety, Reliability, and Quality Assurance Office (SR&QA) will retire from NASA at the end of February after 45 years of government service. Charles S. Harlan will succeed Raines.

JSC Director Aaron Cohen said Raines has made significant contributions to the manned spaceflight programs since he joined the center in October 1964, as Manager of the White Sands Test Facility, N.M. He has led JSC's safety, reliability, and quality assurance activities since June 1969.

Harlan will begin his new assignment immediately. He joined the center in 1964 and has served in a number of key management positions, including Chief, Payload Operations Division and Deputy Director, SR&QA. His most recent assignment has been in Space Station as Manager, Technical and Management Information System (TMIS) Office. Harlan graduated from the University of Kentucky with a B.S. degree in mechanical engineering.

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For Release:

January 9, 1987

Sarah Keegan
Headquarters, Washington, D.C.
(Phone: 202/453-8536)

Doug Ward
Johnson Space Center, Houston
(Phone: 713/483-5111)

RELEASE NO: 87-2

FLIGHT CREW ANNOUNCED FOR NEXT SHUTTLE MISSION

Rear Admiral Richard H. Truly, NASA Associate Administrator for Space Flight, today announced the flight crew for Shuttle mission 26, now targeted for launch on Feb. 18, 1988.

The mission will be commanded by Frederick H. Hauck (Captain, USN), currently assigned as Acting Associate Administrator for External Relations, NASA Headquarters, Washington, D.C. Hauck previously commanded mission 51-A in November 1984 and served as pilot on STS-7 in June 1983. He will resume his astronaut duties about the first week of February.

Richard O. Covey (Lt. Col., USAF) will be the pilot on this mission. Covey served as pilot on flight 51-I in August 1985.

Mission specialists for the upcoming mission will be John M. Lounge, who flew as a mission specialist on flight 51-I; George D. Nelson, who served as a mission specialist on flights 41-C in April 1984 and 61-C in December 1985; and David C. Hilmers (Major, USMC), who flew as a mission specialist on flight 51-J in October 1985.

In announcing the crew, Adm. Truly said, "The naming of the crew for the next flight is a major event in the process of returning the Shuttle to flight. I am particularly pleased to assemble a group of such experienced individuals led by one of our senior spaceflight veterans, and I am very proud of them."

- more -

- 2 -

The primary payload on the upcoming mission is the Tracking and Data Relay Satellite (TDRS), a NASA communications satellite. Additional details about the mission and crew will be announced closer to the time of the flight.

The crew will meet with the press at 2:00 pm EST next Thursday, Jan. 15, at the Johnson Space Center, Houston. The press event will be carried on the NASA Select television system with two-way question and answer.

- end -

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NASA News

National Aeronautics and
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AC 713 483-5111

For Release

John Lawrence
RELEASE NO. 87-003

February 20, 1987

PROSPECTIVE ASTRONAUTS TO BE INTERVIEWED

NASA's Johnson Space Center officials will interview 22 prospective astronaut candidates Monday, Feb. 23.

They are the first of an anticipated four or five groups which will spend a week each at JSC undergoing interviews, indoctrination and testing.

The determination to seek new astronauts is based on such factors as the projected flight rate and attrition in the astronaut corps. Military personnel are nominated by their parent services and applications from civilians are accepted year-round.

The first group consists of Thomas D. Akers (Capt., USAF), Niceville, Fla.; Andrew M. Allen (Capt., USMC), Hollywood, Md.; Debra K. Anderson (Lt., USN), Naval Air Station, Patuxent River, Md.; Anthony J. Benn (Lt. Cdr., USN), Lexington Park, Md.; Waldo F. Carmona (Maj., USA), Hampton, Va.; Thomas W. Crowe, Ph.D., Charlottesville, Va.; Eddie A. Daniels (Maj., USMC), Middleburg, Fla.; Jan D. Dozier, Ph.D., Huntsville, Ala.; Thomas A. Furman (Capt., USAF), Edwards, Calif.; Steven A. Green (Maj., USAF), Las Vegas, Nev.; Gregory S. Harbaugh, Johnson Space Center; Worthe S. Holt, M.D., Indianapolis, Ind.; Mae C. Jemison, M.D., Los Angeles, Calif.; Gregory C. Johnson, (Lt. Cdr., USN), Ridgecrest, Calif.; William S. McArthur (Maj., USA), Patuxent River, Md.; Bruce E. Melnick (Lt. Cdr., USCG), Traverse City, Mich.; William F. Readdy, Johnson Space Center; Kenneth S. Reightler (Lt. Cdr., USN), Lexington Park, Md.; Patrick O. Seitzer, Ph.D., Tucson, Ariz.; Kathleen M. Sullivan, Ph.D., Coral Gables, Fla.; Kenneth E. Teague (Maj., USAF), Glendale, Ariz.; and Brenda W. Young, Ph.D., Johnson Space Center.

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No bio's for 1st group
ct ascans (87-003)

NASA News

National Aeronautics and
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Houston, Texas 77058

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For Release
February 24, 1987

John Lawrence
RELEASE NO. 87-004

NASA T-38 MAKES EMERGENCY LANDING

A NASA T-38 jet aircraft made an emergency landing at Los Alamitos Army Air Field near Los Angeles today. Aboard were astronaut Brewster H. Shaw Jr., 41, and Johnson Space Center Aircraft Operations Division pilot Robert A. Rivers, 35. Both were uninjured.

Rivers was in the front seat of the aircraft and Shaw was in the rear seat as the two-engine jet was making an approach to the Los Alamitos Army Air Field in Orange County, southeast of Los Angeles, at about 3 p.m. Central Standard Time. The aircraft was crossing the Pacific Coast at about 2,000 feet, when it apparently caught fire due to an event of as yet unknown origin. The cockpit immediately filled with smoke. The crew members shut off the electrical system and radioed for an emergency approach. They shut the right engine of the jet down after a fire warning light appeared. A second warning light signaled the possibility of fire in the left engine. The crew members elected not to shut down the engine and bail out since the aircraft was over a residential area. They were able to make the runway with the left engine operating at reduced thrust.

The crew climbed out of the burning aircraft, which was met by fire/rescue units from the Air Field. The aircraft sustained substantial damage.

NASA is forming an investigation team to look into the accident.

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For Release

Terry White
RELEASE NO. 87-005

February 26, 1987
3 pm CST

JOHNSON SPACE CENTER NEGOTIATES WITH TGS TECHNOLOGY FOR CENTER PHOTOGRAPHIC LABORATORY OPERATIONS CONTRACT

The NASA Johnson Space Center, Houston has selected TGS Technology, Inc. of Houston for negotiations leading to a cost-plus-fixed-fee contract for photographic support services.

The contract will cover operation of the Center's still, motion picture and metric photographic laboratories in addition to laboratory analysis and photography. The contract's first year starts on or about April 1, 1987 and will provide for four additional firm-priced one-year extension options. Estimated five-year contract cost and fee is approximately \$16 million.

Other bidders were Omniplan Corporation, Houston; Geonex Technical Services, Inc., St. Petersburg, Florida; and Hagio Photomurals, Inc., Houston.

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AC 713 483-5111

For Release:

Terry White
RELEASE NO. 87-006

February 27, 1987

NOTE TO SCIENCE EDITORS:

ANNUAL LUNAR & PLANETARY SCIENCE MEET HELD

MARCH 16-20 AT NASA JOHNSON SPACE CENTER

The Eighteenth Lunar and Planetary Science Conference is scheduled for March 16-20, 1987 at the NASA Johnson Space Center's Gilruth Recreation Center, Houston.

The program of 29 technical sessions and two special sessions will cover 584 papers on subjects ranging from Venusian tectonics and Martian geology to solar nebula and asteroids. In addition to U.S. presenters, papers from European and Asian countries, including the Soviet Union will be given.

All Conference sessions will be at the Gilruth Center except for two special sessions, Planetary Exploration in the 1990s and Beyond, and Future Exploration of Mars, which will be held in the JSC main auditorium.

Gilruth Center Room 201 is the press room for media covering the Conference. Abstracts of papers will be provided.

NASA News

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AC 713 483-5111

For Release

John Lawrence
RELEASE NO. 87-007

March 6, 1987

SECOND GROUP OF PROSPECTIVE ASTRONAUTS

A second group of 22 prospective astronaut candidates will be interviewed by Johnson Space Center officials the week of March 8.

NASA expects approximately 100 applicants to go through the six-day program of interviews, indoctrination and testing. The first group of 22 was at JSC Feb. 22-27. Successful applicants will report for duty this summer.

The determination to augment the Astronaut Office with new candidates is based on such factors as the projected flight rate and attrition in the corps. Military personnel are nominated to NASA by their parent services, while applications from civilians are accepted year-round.

The second group consists of Kenneth D. Bowersox (Lt., USN), Ridgecrest, Calif.; Kevin P. Chilton (Maj., USAF), Shalimar, Fla.; Gregory S. Coale (Capt., USAF), Edwards, Calif.; Kenneth D. Cockrell (Lt. Cdr., USN), Lemoore, Calif.; Rhonda L. S. Cornum (Capt., USA), Olney, Md.; Cynthia A. Evans, Ph.D., Nyack, N.Y.; Christopher S. Finnerty (Capt., USAF), Centerville, Ohio; Deborah J. Jackson, Ph.D., Port Hueneme, Calif.; John C. Jarrell (Capt., USA), Lorton, Va.; John A. Jaurequi (Maj., USMC), Iwakuni, Japan; John F. Kinzer (Lt. Cdr., USN), Virginia Beach, Va.; Sally A. Look, Ph.D., Germantown, Md.; Donald R. McMonagle (Maj., USAF), Henderson, Nev.; William A. Meeley, Jr. (Cdr., USN), Burke, Va.; James H. Newman, Ph.D., Houston, Tex.; Troy D. Pennington (Maj., USMC), Edwards, Calif.; John D. Rickerson (Maj., USAF), Niceville, Fla.; Mario Runco, Jr. (Lt. Cdr., USN), Aiea, Hawaii; Anna M. Tavormina, Ph.D., League City, Tex.; James S. Voss (Maj., USA), Houston, Tx.; Carl E. Walz (Capt., USAF), Edwards, Calif.; and Scott E. McCarty (Lt. Cdr., USN), Virginia Beach, Va.

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ASTRONAUT CANDIDATE PROGRAM INTERVIEWS

Week of March 8, 1987

Name Lt. Kenneth D Bowersox, USN PLT MS

Born Portsmouth, VA High School Bedford HS, Bedford, IN

Degree(s) Aero Eng - USNA . Mech Eng - Columbia U.

Current Residence Ridgecrest, CA

~~Employed by~~/Stationed at Naval Weapons Center, China Lake, CA

Name May. Kevin P. Chilton, USAF PLT MS

Born Los Angeles, CA High School St. Bernard HS, Playa del Rey, CA

Degree(s) Engineering Science - USAFA . Engineering Mechanics - Columbia U.

Current Residence Shalimar, FL

~~Employed by~~/Stationed at Eglin AFB, FL

^{Capt} Name Gregory S. Coale, USAF PLT MS

Born Aberdeen, MD High School West Springfield HS, Springfield, VA.

Degree(s) Engineering Mechanics, USAFA, Eng Mech Columbia U.

Current Residence Edwards, CA

~~Employed by~~/Stationed at Edwards AFB, CA

Name Lt Cdr. Kenneth D. Cockrell, USN PLT MS

Born Austin, Tx High School Rockdale HS, Rockdale Tx.

Degree(s) Mech Eng - U of Texas . Aero Systems - U of West Fla.

Current Residence Lemoore, CA

~~Employed by~~/Stationed at NAS Lemoore, CA

Name Capt Rhonda L. S. Cornum, USA, PhD, MD PLT MS X
Born Dayton OH High School East Aurora HS, East Aurora, NY
Degree(s) Biology & Biochemistry - Cornell. MD - Uniformed Services U. of the Health Sciences
Current Residence Olney, MD.
~~Employed by~~/Stationed at Walter Reed Army Medical Center, Wash D.C.

Name: Cynthia A. Evans, PhD PLT MS X
Born Buffalo NY High School Central HS, Hamburg, NY.
Degree(s) Geology - U of Rochester. Earth Sciences (PhD) - U of Cal-San Diego
Current Residence Nyack, NY
~~Employed by~~/Stationed at Lamont-Doherty Observatory, Columbia U., NY.

Name Capt. Christopher S. Finnerty, USAF PLT MS X
Born Flushing, NY High School East Meadow HS, East Meadow NY
Degree(s) Aero & Astro Eng - Purdue. Aero Eng - Air Force Institute of Technology
Current Residence Centerville, OH
Employed by/Stationed at Wright-Patterson - AFB, OH

Name Deborah J. Jackson, PhD PLT MS X
Born Topeka High School AFCENT International School, AFD, NY
Degree(s) Physics - MIT, Physics (PhD) - Stanford U
Current Residence Port Hueneme, CA
~~Employed by~~/Stationed at Hughes Aircraft Co., Malibu, CA

Name Capt. John C Jarrell, USA PLT MS X
Born Findlay, OH High School North Shore Senior HS, Houston TX
Degree(s) Aerospace Eng USMA
Current Residence Lorton, VA
Employed by/Stationed at Ft. Belvoir, VA

Name Maj John A. Jauregui, USMC PLT MS X
Born Gooding, Idaho High School Meridian HS, Meridian Idaho
Degree(s) Physics-USNA, Elect. Eng. US Naval Postgraduate School,
Current Residence Iwakuni, Japan
~~Employed by~~ Stationed at Iwakuni, Japan

Name Lt Cdr John F. Kinzer USN PLT X MS
Born Lawton, OK High School Academy of Richmond Co. Augusta, GA
Degree(s) Engineering Science - U of Florida, Aero Systems U of W. Florida
Current Residence Virginia Beach VA
~~Employed by~~ Stationed at currently aboard the USS Nimitz

Name Sally A. Look, PhD PLT MS X
Born Midland, Mich High School San Ramon Valley HS, Danville, CA
Degree(s) Chemistry & Zoology - U of Cal - Santa Barbara, Oceanography (PhD) - U of Cal - San Diego
Current Residence Germanatown, MD
Employed by ~~Stationed at~~ Bionetics Research, Inc, Frederick, MD.
* McCarty (See last page)

Name Maj. Donald R. McMonagle, USAF PLT X MS
Born Flint, Mich High School Michael Hamady HS, Flint, Mich
Degree(s) Aero Eng - USAFA, Mech Eng - Cal State - Fresno.
Current Residence Henderson, NV
~~Employed by~~ Stationed at Edwards AFB, CA.

Name Cdr. William A. Meeley, Jr., USN PLT MS X
Born Philadelphia, PA High School St. Bernard's Prep School, Newark, NJ
Degree(s) Chemical Eng - Villanova U, Aero Eng - US Naval Post Graduate School
Current Residence Poente, VA
~~Employed by~~ Stationed at Naval Air Systems Command, Wash D.C.

Name James H. Newman, PhD PLT MS
Born Trust Territory of the Pacific Islands High School La Jolla HS, La Jolla, CA.
Degree(s) Physics - Dartmouth. Physics (PhD) - Rice U.
Current Residence Houston, Tx
Employed by/~~Stationed at~~ JSC since December 1985.

Name Maj Troy D. Pennington, USMC PLT MS
Born Columbus, Miss High School Central HS, San Angelo Tx.
Degree(s) Aero Eng - U of Texas. Systems Management - USC,
Current Residence Edwards, CA.
Employed by/~~Stationed at~~ Edwards AFB, CA.

Name Maj John D. Rickerson, USAF PLT MS
Born Orlando, FL High School Melbourne HS, Melbourne, FL
Degree(s) Chemistry, U of Florida.
Current Residence Niceville, FL.
Employed by/~~Stationed at~~ Eglin AFB, FL.

Name Lt. Cdr Mario Runco, Jr., USN PLT MS
Born Bronx, NY High School Cardinal Hayes HS, Bronx, NY.
Degree(s) Meteorology - City College of NY. Meteorology - Rutgers.
Current Residence Aiea, Hawaii
Employed by/~~Stationed at~~ Naval Western Oceanographic Center, Hawaii

Name Anna M. Tavormina, PhD PLT PS
Born Darby, PA High School Mater Dei HS, Evansville, IN
Degree(s) Biological Sciences, Indiana U. Telephysics (PhD) U of Penn.
Current Residence League City, Tx
Employed by/~~Stationed at~~ JSC since Sept 1986

Name Maj. James S. Voss, USA PLT MS X
Born Cordova, Alabama High School Opelika HS, Opelika, Ala.
Degree(s) Aero Eng - Auburn U. Aero Eng - U of Colorado,
Current Residence Houston, TX
Employed by/Stationed at JSC (on military detail)

Name Capt. Carl E. Walz, USAF PLT MS X
Born Cleveland, OH High School Charles F. Brush HS, Lyndhurst, OH
Degree(s) Physics - Kent State. Physics - John Carroll U.
Current Residence Edwards, CA
Employed by/Stationed at Edwards AFB, CA

Name Lt Cdr Scott E. McCarty, USN PLT MS X
Born Salt Lake City, UT High School Bishop Garcia Diego HS, Santa Catalina, CA
Degree(s) Aeronautical Engineering, US Naval Post Graduate School
Current Residence Virginia Beach, VA
Employed by/Stationed at NAS Oceana, Virginia Beach, VA

Name _____ PLT MS _____
Born _____ High School _____
Degree(s) _____
Current Residence _____
Employed by/Stationed at _____

Name _____ PLT MS _____
Born _____ High School _____
Degree(s) _____
Current Residence _____
Employed by/Stationed at _____

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For Release

John Lawrence
RELEASE NO. 87-008

March 11, 1987

ASTRONAUT BOLDEN HEADS SAFETY DIVISION

Astronaut Charles F. Bolden, Jr. (Col., USMC), has been appointed Chief of the Safety Division at NASA's Johnson Space Center, Houston.

Bolden succeeds Jerome B. Hammack, who has been appointed assistant to the Director of Safety, Reliability and Quality Assurance for Assurance Technology Development at JSC.

Bolden came to NASA in May 1980 as an astronaut candidate. Since completing a year-long training and evaluation period he has held a variety of assignments within the Astronaut Office. He was pilot of the Space Shuttle Columbia on STS 61-C in January 1986. Most recently he has served as Special Assistant to the JSC Center Director.

The Safety Division is an element of JSC's Directorate of Safety Reliability and Quality Assurance headed by Charles S. Harlan. Bolden's appointment will not preclude his selection to future Space Shuttle flights.

Hammack, in his new position, will be primarily responsible for advance planning, investigating and developing new technologies, and for focusing the direction of the Safety, Reliability and Quality Assurance disciplines for the future.

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National Aeronautics and
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AC 713 483-5111

For Release

Terry White
RELEASE NO. 87-009

March 12, 1987
3 pm CST

JOHNSON SPACE CENTER NEGOTIATES INSTRUMENT CALIBRATION CONTRACT WITH BARRIOS TECHNOLOGY

The NASA Johnson Space Center, Houston has selected Barrios Technology of Houston for negotiations leading to a cost-reimbursement contract for instrument calibration and repair services at the Center.

Estimated cost of the proposed five-year program is approximately \$8.6 million. The contract will cover maintenance and calibration of reference, transfer and working standards instruments, as well as maintenance of National Bureau of Standards Measurement Assurance Programs. Similar instrument calibration and repair for the Meteorological Information Management System are also covered.

Other bidders were Omni Services, Inc., Conroe, Texas; Rothe Development, Inc., San Antonio, Texas; and SIMCO Electronics, Santa Clara, California.

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For Release

March 13, 1987

Terry White
RELEASE NO. 87-010

JSC SCIENCE DIRECTOR KERWIN RETIRES

Dr. Joseph P. Kerwin, 55, director of Space and Life Sciences at the NASA Johnson Space Center, Houston will retire from NASA and the U.S. Navy effective March 31, 1987.

Selected in 1965 as a scientist-astronaut, Kerwin was science pilot on the 28-day first manned visit to Skylab in May-June, 1973. Kerwin and Charles Conrad, Jr. spacewalked to free a jammed solar power panel and to repair other damage sustained during Skylab's launch three weeks earlier.

Kerwin was named JSC Director of Space and Life Sciences in December 1983 after returning from a year and a half as NASA senior science representative in Australia.

Born in Oak Park, Illinois, Kerwin earned a bachelor of arts (philosophy) degree from College of the Holy Cross, Worcester, Massachusetts; a doctor of medicine degree from Northwestern University Medical School, Chicago; and attended the U.S. Navy School of Aviation Medicine at Pensacola, Florida where he qualified as a naval flight surgeon. He earned his naval aviator's wings at Beeville Naval Air Station, Texas in 1962 and

has logged more than 4500 flight hours. He is a Captain.

Kerwin and his wife, the former Shirley Ann Good of Danville, Pennsylvania, have three daughters.

Kerwin will start work in April with Lockheed Missiles and Space Company, of Sunnyvale, California.

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National Aeronautics and
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Lyndon B. Johnson Space Center

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For Release:

Jack Riley
RELEASE NO. 87-011

March 19, 1987

HUNTOON NAMED SPACE AND LIFE SCIENCES DIRECTOR

Carolyn Leach Huntoon, Ph.D., has been named to succeed Joseph P. Kerwin, M.D., as Director, Space and Life Sciences at the Johnson Space Center. The appointment is effective upon Kerwin's retirement April 1.

Dr. Huntoon, an endocrinologist, joined JSC in 1970 as a senior physiologist. She became chief of the Biomedical Laboratories Branch in 1976 and since 1984 has served as Associate Director of JSC. She has served as a member of astronaut selection boards since 1978.

During her 17 years with NASA, Dr. Huntoon has been the recipient of numerous awards, including both the NASA Exceptional Service Medal and the Exceptional Scientific Achievement Medal, the highest honor that NASA gives to a scientist. The University of Texas Health Science Center selected Dr. Huntoon as the Distinguished Professional Woman of the Year for 1985.

Dr. Huntoon's postgraduate work was accomplished at Baylor University College of Medicine in Houston. She spent two years as a National Academy of Science Research Associate in space medicine research.

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NASA News

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AC 713 483-5111

For Release

John Lawrence
RELEASE NO. 87-012

March 20, 1987

THIRD GROUP OF ASTRONAUT APPLICANTS TO BE INTERVIEWED

A third group of 22 prospective astronaut candidates has been invited to NASA's Johnson Space Center, Houston, for a week-long series of interviews and tests beginning Sunday, March 22.

Approximately 100 applicants in five groups are expected to be invited to JSC. Previous groups were at the center Feb. 22-27 and March 8-13. Successful applicants will report for duty this summer.

The determination to hire additional astronaut candidates is based on such factors as the projected flight rate and attrition in the astronaut corps. Military personnel are nominated to NASA by their parent services, while applications from civilians are accepted year-round.

The third group consists of Richard L. Bennett (Capt., USAF), Shalimar, Fla.; Curtis L. Brown, Jr. (Capt., USAF), Niceville, Fla.; Kevin P. Burns (Maj., USAF), Lancaster, Calif.; Joseph L. Byerly (Capt., USAF), Shalimar, Fla.; David W. Eidsaune (Capt., USAF), Edwards AFB, Calif.; Bruce D. Remick (Lt., USN), Leonardtown, Md.; Thomas B. Russell (Lt. Cdr., USN), Patuxent River, Md.; Bruce E. Stofferahn (Capt., USAF), Niceville, Fla.; Michael R. U. Clifford (Maj., USA), Norfolk, Va.; James D. Cloyd (Lt., USN), Pt. Mugu, Calif.; David B. Cripps (Capt., USA), Patuxent River, Md.; Katherine R. Daves, Houston, Tx.; C. Michael Foale, Ph.D., Seabrook, Tx.; Joshua K. Hoyt, Ph.D., Woods Hole, Mass.; John N. Kohut (Lt. Cdr., USN), Hollywood, Md.; Thomas P. Moore, M.D., Indianapolis, Ind.; Ellen Ochoa, Ph.D., Pleasanton, Calif.; William A. Pailes (Lt. Col., USAF), Hawthorne, Calif.; Mary E. Reid, M.D., Birmingham, Ala.; Susan J. Reynolds, Kemah, Tx.; David E. Walker (Capt., USAF), Edwards, Calif.; and Virginia A. Whitelaw, Ph.D., Friendswood, Tx.

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-end-

87-012

ASTRONAUT CANDIDATE PROGRAM INTERVIEWS

Week of March 22, 1987

Name: Capt. Richard L. Bennett - USAF PLT_X_MS___
Born: McKeesport, Pa. High School: Norwin HS, N. Huntington, PA.
Degree(s): Aeronautical Engineering, Air Force Academy
Current Residence: Shalimar, FL
Stationed at: Eglin AFB, FL

Name: Capt. Curtis L. Brown, Jr. - USAF PLT_X_MS___
Born: Elizabethtown, NC High School: East Bladen HS,
Elizabethtown, NC
Degree(s): Electrical Engineering, Air Force Academy
Current Residence: Niceville, FL
Stationed at: Eglin AFB, FL

Name: Maj. Kevin P. Burns - USAF PLT_X_MS___
Born: Stamford, CT High School: St. Bernard Boys HS
Montville, CT
Degree(s): Electrical Eng, AF Academy & Electrical Eng, UC-Berkeley
Current Residence: Lancaster, CA
Stationed at: Edwards AFB, CA

Name: Capt. Joseph L. Byerly - USAF FLT_X_MS___
Born: West York, PA High School: George C. Marshall HS
Falls Church, VA
Degree(s): Physics/Math, AF Academy & Physics, MIT
Current Residence: Shalimar, FL
Stationed at: Eglin AFB, FL

Name: Capt. David W. Eidsaune - USAF PLT_X_MS___

Born: Seattle, WA High School: Meridian Senior HS, Kent, WA

Degree(s): Astronautical Engineering/Engineering Sci., AF Academy
Astronautical Engineering, AF Institute of Technology

Current Residence: Edwards AFB, CA

Stationed at: Edwards AFB, CA

Name: Lt. Bruce D. Remick - USN PLT_X_MS___

Born: Burlington, VT High School: Champlain Valley Union HS
Hinesburg, VT

Degree(s): Civil Engineering, U of Vermont
Aeronautical Engineering, Naval Postgraduate School

Current Residence: Leonardtown, MD

Stationed at: Naval Air Test Center, Patuxent River, MD

Name: Lt. Cmdr. Thomas B. Russell - USN PLT_X_MS___

Born: San Diego, CA High School: W. T. Woodson HS, Fairfax, VA

Degree(s): Ocean Engineering, Naval Academy

Current Residence: Patuxent River, MD

Stationed at: USN Test Pilot School, Patuxent River, MD

Name: Capt. Bruce E. Stofferahn - USAF PLT_X_MS___

Born: Sioux Falls, SD High School: West Central HS, Hartford, SD

Degree(s): Aerospace Engineering, West Virginia U.
MBA & Aviation Management, Embry Riddle U.

Current Residence: Niceville, FL

Stationed at: Eglin AFB, FL

Name: Ellen Ochoa, PhD PLT___MS_X_
Born: Los Angeles, CA High School: Grossmont HS, La Mesa, CA
Degree(s): Physics & Electrical Engineering, Stanford U.
Current Residence: Pleasanton, CA
Employed by: Sandia National Laboratory, Livermore, CA

Name: Lt. Col. William A. Pailes - USAF PLT___MS_X_
Born: Hackensack, NJ High School: Kinnelon HS, Kinnelon, NJ
Degree(s): Computer Science, AF Academy & Computer Sci., Texas A&M
Current Residence: Hawthorne, CA
Stationed at: HQ Space Division, Los Angeles, CA

Name: Mary E. Reid, MD PLT___MS_X_
Born: Buffalo, NY High School: Riveria Beach HS, Riveria Beach, FL
Degree(s): Psychology, Boise State & MD, U of Alabama
Current Residence: Birmingham, AL
Employed by: Baptist Medical Center, Birmingham, AL &
US Army Reserve, Ft. Rucker, AL

Name: Susan J. Reynolds PLT___MS_X_
Born: Greenville, TX High School: Richardson HS, Richardson, TX
Degree(s): Electrical Engineering, U of South Carolina
Current Residence: Kemah, TX
Employed by: MITRE Corporation, Houston, TX

Name: Capt. David E. Walker - USAF

PLT___MS_X_

Born: Denton, TX High School: SHAPE American School
Casteau, Belgium

Degree(s): Aerospace Engineering, U of Texas

Current Residence: Edwards, CA

Stationed at: Edwards AFB, CA

Name: Virginia A. Whitelaw, PhD.

PLT___MS_X_

Born: Detroit, MI High School: Kimball HS, Royal Oak, MI
03-18-55

Degree(s): Physics, Michigan State & Biophysics, U of Chicago

Current Residence: Friendswood, TX

Employed by: Johnson Space Center since October 1985

NASA News

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center

Houston, Texas 77058
AC 713 483-5111

Leon N. Perry
Headquarters, Washington, D.C.
(Phone: 202/453-1548)

For Release

March 27, 1987

Terry White
Johnson Space Center, Houston, Texas
(Phone: 713/483-5111)

Jim Doyle
Jet Propulsion Laboratory, Pasadena, Calif.
(Phone: 818/354-5011)

RELEASE: 87-013

NASA BEGINS STUDY OF MARS SAMPLE RETURN MISSION

Two National Aeronautics and Space Administration centers are studying concepts for designing and building a robot space vehicle that would travel from Earth to the planet Mars, land and explore the martian surface and return an 11-pound sample of rock and soil to Earth.

Human exploration of Mars, preceeded by robotic missions including the sample-return, is one of four space initiatives recently brought under study by NASA to help the nation determine its next major goal in space. Other initiatives are: expanded Earth systems study, enhanced solar system exploration, and a permanent scientific base on the moon.

If approved and funded, the sample-return mission would be launched in 1998 and return with martian soil, rock and atmosphere samples in 2001. NASA has allocated \$1.2 million for studies in Fiscal Years 1987-88.

The project has been recommended by the National Academy of Sciences and other space advisory groups. Unmanned Mars missions would be forerunners of manned Mars exploration in the 21st-first century.

Task teams at NASA's Johnson Space Center (JSC), Houston, and at NASA's Jet Propulsion Laboratory (JPL), Pasadena, Calif., are outlining preliminary scenarios on how a Mars sample-return mission could be flown.

JPL would study a Mars orbiter spacecraft and an automated surface rover equipped with sample-gathering scoops and tongs. The orbiter and Mars surface craft would depend heavily on preprogrammed computer software to manage tasks, since radio commands take almost an hour to reach Mars from Earth.

JPL will have overall project management. JPL managed the Viking Mars lander missions in 1975-76, the Voyager planetary missions and most other United States unmanned planetary exploration projects.

As now envisioned, JSC would study a spacecraft capable of entering and slowing down in the martian atmosphere--estimated at one percent the density of the Earth's atmosphere--to land gently on the planet's surface. JSC also would study the vehicle stage for lifting off Mars to rendezvous and dock with an orbiting spacecraft prior to return to Earth with the surface samples.

Returned martian soil, rock and atmosphere samples would undergo laboratory analysis, much like samples from the Moon during the Apollo lunar landing program. The Space Station probably will be used for initial study and analysis of the returned samples.

JSC will award two \$350,000 martian atmospheric-entry study contracts, and JPL will award two \$250,000 surface mobility and rover-lander rendezvous study contracts. The four contracts will begin October 1, 1987. Representatives of firms interested in the Mars project will be briefed at JPL March 31.

- end -

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MARS SAMPLE RETURN MISSION

A mission to Mars using a robotic rover to traverse the planet's surface and a lander to return surface and subsurface samples to Earth has been recommended by the Solar System Exploration Committee of the NASA Advisory Council. The committee stipulated that the mission should be undertaken before the year 2000. Such a mission would provide a wealth of scientific information about Mars and increase our understanding of the origin and evolution of all terrestrial planets, including Earth.

Studies of a Mars Sample Return mission have been ongoing for seven years. The focus has been on an all U.S. mission in which this country would provide all the major elements. That approach remains a high priority goal. But recently NASA also has considered a mission which could involve one or more international partners.

Currently there is a joint study being conducted by the Jet Propulsion Laboratory and Johnson Space Center, and including Science Applications International Corp. (SAIC), to

examine the possible concept for a U.S. unmanned mission in the mid to late 1990s. This mission would be a step toward an eventual manned mission to Mars in the next century. Industrial firms will participate through contracts with both centers.

The overall concept involves flying a vehicle to Mars that will be initially placed into Mars orbit. A lander will separate from the rest of the vehicle and descend through the atmosphere to the surface. That lander payload would include a rover that would move over the Martian landscape, selecting scientifically significant rock and soil samples amounting to a few kilograms.

After about one year the rover would return to the lander and transfer the collected samples to a small rocket that would lift them back into Mars orbit. There, they would rendezvous with the original orbiter which would launch the sample-containing vehicle back to Earth.

The team is studying the technique of aerocapture to use the thin Martian atmosphere to brake the arriving spacecraft into orbit around the planet at the end of a 300-day voyage from Earth. This decreases the weight of the whole vehicle below that required if retro rockets would be used. Atmospheric drag from the seven kilometers per second (17,000 mph) approach into the martian atmosphere would dissipate excess speed to decelerate and "capture" the vehicle into an an elliptical orbit of Mars. Accurate guidance would steer the spacecraft into the martian

atmosphere at an altitude of 180 km (110 miles) above the surface.

Mars' atmosphere is almost entirely carbon dioxide with a surface pressure less than one one-hundredth that of Earth's atmosphere -- about the same density as air 50 km (31 miles) above Earth.

Descent through the Mars atmosphere to an automated, intact landing presents a major technical challenge to lander designers. After separation from the orbiter and a deorbit rocket burn, the entry guidance system would use the entry aeroshell's aerodynamic lift to aim at a selected landing site.

Following a parachute deceleration on the way to the surface, retro rockets would be ignited and the lander's guidance system would automatically sense and avoid hazardous terrain. Television pictures of such hazards could take as long as 20 minutes to reach JPL's planetary flight control center, and evasive maneuver commands would take another 20 minutes to reach the lander -- too late to maneuver around or over a hazard, hence the lander must be capable of performing this function on its own.

The spacecraft in Mars orbit could support the surface operations in several ways. It could provide imaging for a landing site survey and subsequently provide imaging of an area ahead of the rover to aid in planning its path. An orbiter also would serve as a telecommunications relay link between the rover and Earth. This would greatly extend the

rover's operations over each day when not in view of Earth and serve as a backup to the direct Earth link.

The rover would, however, have the capability to communicate directly with an earth-based operator sending commands and receiving data. The current study of the Mars rover has considered a design concept that includes a stereo camera vision system, sensors, a computer brain, controlled manipulators and a drill system for acquiring samples.

The current design concept for a roving vehicle would have a mass of no more than 1,500 kilograms (3,300 pounds), and could take a variety of configurations. One of those includes three two-wheeled cabs connected by flexible ties which would permit pitch, yaw and roll motions. The one-meter diameter wheels and the flexible connection would permit climbing obstacles of 1.5 meters, climb grades of about 30 degrees on packed ground and about 20 degrees on loose soil or sand. The front cab would contain the surface sample science, including the drill mechanism and robot arms. The middle cab would contain the communications, power conditioning and storage, control and navigation subsystems. The stereo vision system for navigation would be mounted on a three-degree-of-freedom mast with the base of the mast able to rotate in azimuth and elevation while the camera head could nod. The rover would be steered by counter rotation of the two end cabs. The third of the three cabs would carry a radioisotope thermoelectric generator, (RTG) with average power of 280 watts.

Two telerobotic methods were considered in the design concept. The first is the Computer-Aided Remote Driving (CARD) method. It relies on images acquired by the rover's camera system to designate an extended path up to 250 meters long using Earth-based image analysis and computation techniques. A fail-safe laser range finder would measure the distance between the rover and any obstacles not previously considered and planned for. It is expected that the rover could traverse at an average speed of more than one kilometer per day with this technique.

Another technique is semiautonomous and allows longer range traverses during a single command cycle using high-resolution images from an orbiter. An operator on Earth could plan traverses of up to a few kilometers in one day.

All the rover design proposals reflect fundamental guidelines consistent with reasonable extrapolations of current technology. The study group has emphasized, however, that the current concept as described is not considered a rover mission baseline design. Rather a wide range of concepts will be studied at NASA centers, universities and in private industry.

Once Mars rover has completed a 300-day quest for wide-ranging surface samples and has reached a rendezvous with the return vehicle, the sample container would be transferred to the ascent vehicle for liftoff to martian orbit and rendezvous with the orbiter. Then another transfer

passes the sample canister to the Earth return vehicle attached to the orbiter.

The task team will study several combinations of liquid and solid fuel ascent vehicle propulsion, techniques for Mars orbit rendezvous with the orbiter, with related trade-offs between weight and performance.

After its 10-month return to the Earth, the vehicle will approach at 4 km per second, but will speed up by Earth's gravity as it nears to 13 km per second (27,000 mph). Then, a solid retrorocket or aerobraking would place the Earth return spacecraft into an elliptical orbit. By comparison, Apollo command modules returning from the moon entered the atmosphere at 11 km per second (25,000 mph).

Current plans are to rendezvous the Earth return spacecraft with the Space Station for quarantine and analysis of the Mars sample cargo prior to return to Earth via space shuttle and further analysis at planetary materials laboratories at JSC and elsewhere.

In addition to the JPL and JSC study activities, NASA's Strategic Planning Council is reviewing a total Mars mission effort that could be part of a new U.S. space leadership initiative. The mission planning and leadership initiative also includes less ambitious reconnaissance precursor missions following the NASA Mars Observer spacecraft mission currently planned for launch in 1992.

JPL will lead the overall Mars study and be responsible for the rover and Mars orbiter portions of the mission and JSC will study the aerobraking and atmospheric entry systems, and also be responsible for Mars landing vehicle design and the ascent vehicle, and the Earth return systems.

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Jim Doyle/JPL 818/354-5011
Terry White/JSC 713/483-8649

NASA News

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center

Houston, Texas 77058
AC 713 483-5111

For Release

John Lawrence
RELEASE NO. 87-014

FOURTH GROUP OF PROSPECTIVE ASTRONAUTS TO BE INTERVIEWED

A fourth group of 22 prospective astronaut candidates is at NASA's Johnson Space Center, Houston, this week undergoing testing, interviews and indoctrination.

This brings to 88 the total invited to JSC. A fifth group will arrive next week.

The fourth group consists of John C. Ball (Cdr., USN), Bonita, Calif.; Dan P. Clemens, Ph.D., Tucson, Ariz.; Paul R. Deppe (Lt. Cdr., USN), Newport News, Va.; Lance G. Grace (Maj., USAF), Edwards AFB, Calif.; Christopher R. Henry (Cdr., USN), Coronado, Calif.; Jenny M. Howard, League City, Tx.; John D. Howard (Maj., USAF), Edwards AFB; Beth E. Hubert (Lt., USN), Lexington Park, Md.; Erwin B. Jenschke (Maj., USAF), Edwards, Calif.; Lewis D. Jollett (Maj., USAF), Edwards; Marcus A. McInnis (Lt. Cdr., USN), California, Md.; JoAnn Milliken, Ph.D., Alexandria, Va.; Cheryl A. Neely, Cocoa Beach, Fla.; Robert A. Rivers, Houston, Tex.; Samuel K. Ryals (Maj., USAF), Edwards AFB; James R. Selevan, M.D., Laguna Beach, Calif.; Michael H. Stevens (Maj., USMC), Patuxent River, Md.; Joseph R. Tanner, Houston, Tex.; Donald A. Thomas, Ph.D., Titusville, N.J.; Teri L. Vossler, Ph.D., Durham, N.C.; Jeffrey N. Williams (Capt., USA), Monterrey Calif.; and Peter J. K. Wisoff, Ph.D., Houston, Tex.

-end-

87-014

ASTRONAUT CANDIDATE PROGRAM INTERVIEWS

Week of March 29, 1987

Name: CDR John C. Ball, USN FLT__MS_X_
Born: Lakewood, OH. **High School:** St. Edward HS, Lakewood, OH.
Degree(s): Aerospace Engineering, Naval Academy
 Aeronautical Engineering, Naval Postgraduate School
Current Residence: Bonita, CA

Stationed at: Naval Air Rework Facility, NAS North Island, San Diego, CA

Name: Dan P. Clemens, PhD FLT__MS_X_
Born: Yerington, NV. **High School:** Enterprise HS, Redding, CA
Degree(s): Electrical Engineering & Physics, UC - Davis.
 Physics & Astronomy, U of Massachusetts
Current Residence: Tuscon, AZ

Employed by: U of Arizona, Steward Observatory

Name: LCDR Paul R. Deppe, USN PLT__MS_X_
Born: Indianapolis, IN.
High School: North Central HS, Indianapolis.
Degree(s): Electrical Engineering, Naval Academy.
Current Residence: Newport News, VA

Stationed at: NAS Oceana, VA.

Name: MAJ Lance G. Grace, USAF PLT_X_MS__
Born: Chicago, IL.
High School: Eisenhower HS, Blue Island, IL.
Degree(s): Astronautical Engineering/Engineering Science, AF Academy
 BSA, U of N. Colorado
Current Residence: Edwards AFB, CA

Stationed at: Edwards AFB, CA

Name: CDR Christopher R. Henry, USN PLT_X_MS_

Born: Pasadena, CA.

High School: Punahou School, Hawaii.

Degree(s): Oceanography, Naval Academy. Systems Management, USC.
Aeronautical Science, U of West Florida

Current Residence: Coronado, CA

Stationed at: NAS North Island, Sandiego, CA.

Name: Jenny M. Howard *Jenny Howard* PLT_MS_X_

Born: Beech Grove, IN.

High School: Arlington HS, Indianapolis, IN.

Degree(s): Aero & Astro Engineering, Purdue. Physical Science, UHCLC.

Current Residence: League City, TX.

Employed by: Johnson Space Center since April 1980.
Booster Systems Flight Controller, MOD.

Name: MAJ John D. Howard, USAF PLT_X_MS_

Born: West Palm Beach, FL.

High School: Nova HS, Ft, Lauderdale, FL.

Degree(s): Astronautical Engineering, AF Academy.
Political Science, U of Pittsburgh.

Current Residence: Edwards AFB, CA

Stationed at: Edwards AFB, CA

Name: LT Beth E. Hubert, USN PLT_MS_X_

Born: Spokane, WA.

High School: Central Valley HS, Veradale, WA.

Degree(s): Mechanical Engineering, Washington State.
Aeronautical Engineering, Naval Postgraduate School.

Current Residence: Lexington Park, MD

Employed by/Stationed at: Naval Air Test Center, Patuxent River, MD

Name: MAJ Erwin B. Jenschke, USAF FLT___MS_X_

Born: Pottstown, PA.

High School: St. Pius X HS, Pottstown, PA.

Degree(s): Chemical Engineering, Lehigh U.

Current Residence: Edwards, CA

Stationed at: Edwards AFB, CA

Name: MAJ Lewis D. Jollett, USAF FLT_X_MS___

Born: Edenburg, TX.

High School: South Hall HS, Gainesville, GA.

Degree(s): Physics, Georgia Tech. Computer Science, Georgia Tech.

Current Residence: Edwards, CA

Stationed at: Edwards AFB, CA

Name: LCDR Marcus A. McInnis, USN FLT___MS_X_

Born: Waterville, ME.

High School: Mt. Blue HS, Farmington, ME.

Degree(s): Marine Engineering, Maine Maritime Academy.
Aeronautical Engineering, Naval Postgraduate School.

Current Residence: California, MD

Stationed at: Naval Air Test Center, Patuxent River, MD.

Name: JoAnn Milliken, PhD FLT___MS_X_

Born: Philadelphia, PA.

High School: Holy Spirit HS, Absecon, NJ.

Degree(s): Chemistry, La Salle College, PA. Chemistry, U of Pennsylvania

Current Residence: Alexandria, VA

Employed by: Naval Research Laboratory, Washington, DC.

Name: Cheryl A. Neely PLT___MS_X_
Born: Wurzburg, West Germany.
High School: Andress HS, El Paso, TX.
Degree(s): Physics, Texas Christian U. Computer Science, Florida Tech.
Current Residence: Cocoa Beach, FL
Employed by: McDonnell Douglas Astronautics, KSC.

Name: Robert A. Rivers PLT___MS_X_
Born: Jacksonville, FL. 10-2-57
High School: Robert E. Lee HS, Jacksonville, FL.
Degree(s): Math, U of N Carolina. Aerospace Engineering, U of Virginia.
Current Residence: Houston, TX.
Employed by: Research Pilot, Johnson Space Center since October 1986.

Name: MAJ Samuel K. Ryals, USAF PLT_X_MS___
Born: Mare Island, Vallejo, CA.
High School: Newport HS, Bellevue, WA.
Degree(s): Astronautical Engineering, AF Academy. Systems Management, USC.
Current Residence: Edwards AFB, CA
Stationed at: Edwards AFB, CA

Name: James R. Selevan, MD PLT___MS_X_
Born: Miami, FL.
High School: Miami Beach, FL.
Degree(s): Electrical Engineering, Carnegie-Mellon U. MD, U of Miami.
Current Residence: Laguna Beach, CA
Employed by: South Coast Medical Center, South Laguna, CA

Name: MAJ Michael H. Stevens, USMC FLT_X_MS_

Born: Pocatello, ID.

High School: Coronado HS, Scottsdale, AZ.

Degree(s): Marine Engineering, Naval Academy.

Current Residence: Patuxent River, MD

Stationed at: Naval Test Pilot School, Patuxent River, MD

Name: Joseph R. Tanner) S FLT__MS_X_

Born: Danville, IL.

High School: Danville HS, Danville, IL.

Degree(s): Mechanical Engineering, U of Illinois.

Current Residence: Houston, TX.

Employed by: Research Pilot, Johnson Space Center since August 1984.

Name: Donald A. Thomas, PhD FLT__MS_X_

Born: Cleveland, OH.

High School: Cleveland Heights, OH.

Degree(s): Physics, Case Western U (OH). Materials Science, Cornell U.

Current Residence: Titusville, NJ

Employed by: A T & T, Princeton, NJ.

Name: Teri L. Vossler, PhD FLT__MS_X_

Born: Cheverly, MD.

High School: Bowie HS, Bowie, MD.

Degree(s): Chemistry, U of Maryland. Chemistry, Washington U (MO).

Current Residence: Durham, NC

Employed by: AFOSR Atmospheric Sciences Research Lab, Research Triangle Park, NC

Name: CAPT Jeffrey N. Williams, USArmy PLT___MS_X_

Born: Superior, WI.

High School: Winter HS, Winter, WI.

Degree(s): Applied Science/Engineering, US Military Academy.

Current Residence: Monterrey, CA

Stationed at: Naval Postgraduate School, Monterrey, CA

Name: Peter J. K. Wisoff, PhD PLT___MS_X_

Born: Norfolk, VA.

High School: Norfolk Academy, Norfolk, VA.

Degree(s): Physics, U of Virginia. Physics & Applied Physics, Stanford U.

Current Residence: Houston, TX

Employed by: Rice University

NOTE:

Peter J K. Wisoff, Ph.D., of Houston, is employed by Rice Univ.

Cheryl A. Neely of Cocoa Beach, Fla., is employed at KSC by McDonnell Douglas Astronautics.

from JSC:

Jenny M. Howard, 31, is a Booster Systems Flight Controller in the Mission Operations Directorate. And yes, she made the "limits to inhibit" call to strap open the SSMEs on mission 51-F, July 29, 1985.

Robert A. Rivers, 35, is a research pilot in the Aircraft Operations Division, Flight Crew Operations Directorate. And yes, he was pilot (with Brewster Shaw aboard) of the T-38 struck by lightning who strapped the engines open despite fire warning lights and landed safely at Los Alamitos Army Airfield Calif., Feb. 24.

Joseph R. Tanner, 37, research pilot in the Aircraft Operations Division, Flight Crew Operations Directorate.

NASA News

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
Houston, Texas 77058
AC 713 483-5111

For Release

Steve Nesbitt
RELEASE NO. 87-015

April 6, 1987

FIFTH GROUP OF PROSPECTIVE ASTRONAUTS TO BE INTERVIEWED

A fifth and final group of 24 prospective astronaut candidates is at NASA's Johnson Space Center in Houston this week undergoing testing, interviews and indoctrination.

This brings to 112 the total invited to JSC. Between 12 and 15 will be selected later this spring as astronaut candidates.

An astronaut candidate undergoes a one-year period of training and evaluation before becoming a member of the astronaut corps.

The fifth group consists of Mark E. Almquist (Capt., USAF), Edwards, Calif.; Douglas N. Barlow (Capt., USAF), Colorado Springs, Colo.; Matthew W. Blake, Mountain View, Calif.; Courtland C. Bivens (Capt., USA Reserve), San Jose, Calif.; Michael S. Burns, Ph.D., Laramie, Wyo.; Daniel W. Bursch (Lt., USN), Chula Vista, Calif.; Jeffrey G. Canclini, Dayton, Ohio; Bryan Chakoumakos, Ph.D., Albuquerque, N.M.; Virginia A. Clare, Huntington Beach, Calif.; Farrell W. Corley (LCdr., USN), San Diego, Calif.; Wayne M. Denesik (Capt., USAF), Edwards, Calif.; Michael E. Fossum (Capt., USAF), Edwards, Calif.; Bernard A. Harris, Jr., M.D., San Jose, Calif.; William N. Higginbotham (Capt., USAF), Edwards, Calif.; Charles R. Justiz, Seabrook, Tex.; Eric R. Keto, Cambridge, Mass.; Barbara J. Lee, Katy, Tex.; Gary A. Mercer (Lt., USN), Patuxent River, Md.; Donald R. Pettit, Ph.D., Santa Fe, N.M.; John R. Rummel, Ph.D., Silver Spring, Md.; Richard F. Schaller, Champaign, Ill.; Mark D. Shackelford (Capt., USAF), Edwards, Calif.; Nancy J. Sherlock (Capt., USA), Enterprise, Ala.; and John E. Von Gohren (Lt., USN), Virginia Beach, Va.

-end-

Name: Michael Shane Burns, PhD PLT___MS_X_
Born: Evanston, WY. High School: Evanston HS, Evanston, WY.
Degree(s): Physics, U of California-San Diego.
Physics, U of California-Berkeley.
Current Residence: Laramie, WY.

Employed by: University of Wyoming

Name: LT Daniel W. Bursch, USN PLT___MS_X_
Born: Bristow, PA. High School: Vestal Senior HS, Vestal, NY.
Degree(s): Physics, Naval Academy.
Current Residence: Chula Vista, CA.

Stationed at: Cruiser Destroyer Group 1, FPO San Francisco.

Name: Jeffrey G. Canclini PLT___MS_X_
Born: Fort Bragg, CA
High School: Ukiah HS, Ukiah, CA.
Degree(s): Economics & Mechanical Engineering, U of California-Davis
Current Residence: Dayton, OH
Employed by: Wright-Patterson AFB, OH

Name: Bryan Chakoumakos, PhD PLT___MS_X_
Born: Boston, MA.
High School: Mt. Blue HS, Farmington, ME.
Degree(s): Geology, U of New Mexico. Geology, Virginia Polytechnic Inst.
Current Residence: Albuquerque, NM
Employed by: University of New Mexico.

Name: Virginia A. Clare

PLT___MS_X_

Born: Denton, TX.

High School: Oran HS, Oran, MO.

Degree(s): Aerospace Engineering, U of Oklahoma.

Current Residence: Huntington Beach, CA.

Employed by: Douglas Aircraft Co., Long Beach, CA.

Name: LCDR Farrell W. Corley, USN

PLT_X_MS___

Born: Elk City, OK. High School: Elk City HS, Elk City, OK.

Degree(s): Aerospace Engineering, U of Oklahoma.
Aeronautical Engineering, Naval Postgraduate School.

Stationed at: NAS Miramar, San Diego, CA.

Name: CAPT Wayne M. Denesik, USAF

PLT_X_MS___

Born: London, Canada.

High School: Bella Vista HS, Fair Oaks, VA.

Degree(s): Electrical Engineering, U of California-Davis

Current Residence: Edwards, CA

Stationed at: Edwards AFB, CA.

Name: CAPT Michael E. Fossum, USAF

PLT___MS_X_

Born: Souix Falls, SD. High School: McAllen HS, McAllen, TX.

Degree(s): Mechanical Engineering, Texas A & M.
Systems Engineering, Air Force Institute of Technology.

Current Residence: Edwards AFB, CA.

Stationed at: Edwards AFB, CA.

Name: Bernard A. Harris, Jr., MD PLT__MS_X_
Born: Temple, TX High School: San Antonio HS, San Antonio, TX
Degree(s): Biology, U of Houston. MD, Texas Tech U
Current Residence: San Jose, CA
Employed by: National Research Council at NASA Ames Research Center,
Moffett Field, CA.

Name: CAPT William N. Higginbotham, USAF PLT_X_MS__
Born: Phoenix, AZ
High School: Locust Fork HS, Locust Fork, AL.
Degree(s): Mechanical Engineering, U of Alabama
Current Residence: Edwards AFB, CA.
Stationed at: Edwards AFB, CA.

Name: Charles R. Justiz PLT__MS_X_
Born: Miami, FL. 12-09-52
High School: Archbishop Curley HS, Miami, FL.
Degree(s): Aerospace Engineering, Air Force Academy
Current Residence: Seabrook, Texas
Employed by: Johnson Space Center since September 1980, Research Pilot.

Name: Eric R. Keto PLT__MS_X_
Born: Washington, DC.
High School: St. Albans School, Washington, DC.
Degree(s): Geology, Princeton U.
Current Residence: Cambridge, MA.
Employed by: Harvard-Smithsonian Center for Astrophysics.

Name: Barbara J. Lee PLT___MS_X_

Born: Dayton, OH.

High School: Northmont HS, Clayton, OH.

Degree(s): Geology, Indiana U. Geophysics, Penn State.

Current Residence: Katy, TX.

Employed by: Able Aviation Co.

Name: LT Gary A. Mercer, USN PLT___MS_X_

Born: Lewiston, ID.

High School: North Central HS, Spokane, WA

Degree(s): Nuclear Engineering, U of Oklahoma

Current Residence: NAS Patuxent River, MD

Stationed at: Naval Air Test Center, NAS Patuxent River, MD.

Name: Donald R. Pettit, PhD PLT___MS_X_

Born: Silverton, OR.

High School: Silverton Union HS, Silverton, OR.

Degree(s): Chemical Engineering, Oregon State.
Chemical Engineering, U of Arizona.

Current Residence: Santa Fe, NM

Employed by: Los Alamos National Laboratory.

Name: John D. Rummel, PhD PLT___MS_X_

Born: Highland Park, IL.

High School: Deerfield HS, Deerfield, IL.

Degree(s): BS, MS, PhD in Geology, Princeton University, Princeton, NJ.

Current Residence: Silver Spring, MD.

Employed by: NASA Headquarters, Washington, DC

Name: Richard F. Schaller PLT___MS_X_

Born: Lakewood, OH.

High School: Belleville HS, Belleville, IL.

Degree(s): Physics & Nuclear Engineering, U of Illinois.

Current Residence: Champaign, IL

Employed by: Illinois Power Co., Clinton, IL.

Name: CAPT Mark E. Shackelford, USAF LT_X_RE___

Born: Richmond, VA.

High School: Douglas S. Freeman HS, Richmond, VA.

Degree(s): Astronautical Engineering, Air Force Academy.

Current Residence: Edwards AFB, CA.

Stationed at: Edwards AFB, CA.

Name: CAPT Nancy J. Sherlock, USArmy PLT___MS_X_

Born: Wilmington, DE High School: Troy HS, Troy, OH.

Degree(s): Biological Sciences, Ohio State
Safety Engineering, USC

Current Residence: Enterprise, AL.

Stationed at: Ft. Rucker, AL.

Name: LT John E. Von Gahlen, USN PLT___MS_X_

Born: Munich, Germany.

High School: Bowie Senior HS, Bowie, MD.

College: USNA, Annapolis, MD

Current Residence: 10000 1st St, Norfolk, VA

Stationed at: USNA, Virginia Beach, VA

Brian Welch
RELEASE NO. 87-016

NEW VISITOR COMPLEX TO BE BUILT AT JOHNSON SPACE CENTER

The Johnson Space Center and the Manned Space Flight Education Foundation, Inc., have signed a memorandum of understanding (MOU) leading to creation of a \$40 million visitor complex and educational facility here.

The complex will be built on land licensed to the foundation by JSC. No federally appropriated funds will be used to build or support the complex, which will be financed through a combination of revenues generated by visitors, a bond issue and other sources of private funding.

The 123-acre tract is immediately adjacent to the space center's main entrance on NASA Road One.

Although a final design for the visitor complex main building is still under consideration, a 1985 feasibility study suggested that a 120,000-square-foot domed structure could be built and operated out of revenues generated by the JSC visitor program.

As now envisioned, the complex would serve JSC's estimated 1.2 million annual visitors with lunar landscape and Mission

Control Center simulations, two movie theaters, an exhibit hall for manned spaceflight artifacts, classrooms, office space, food services and a bookstore and gift shop.

The movie theaters will be built to show films in the IMAX and OMNIMAX formats. The format, larger than 70 millimeters, provides the viewer with a 180-degree left-to-right and 90-degree top-to-bottom panorama. Typically, IMAX/OMNIMAX theaters include more than 80 high fidelity audio speakers. There are fewer than 20 such theaters in the world, and the nearest one to Houston is in Fort Worth.

Two films on space flight, "Hail Columbia" and "The Dream is Alive," have been produced by IMAX Corp., in cooperation with NASA and the Smithsonian Institution's National Air and Space Museum. For the making of "The Dream is Alive," IMAX cameras were carried into space aboard the Space Shuttle on four missions.

The theaters will seat approximately 800 people.

As now planned, the Visitor Center complex also will include a detailed lunar landscape, allowing visitors to see Apollo era hardware in the context of a lunar landing mission. The simulation will depict activities at one of the six U.S. landing sites on the Moon, and will house displays of equipment used by Apollo astronauts to train for those missions.

Also envisioned is a reproduction of the Apollo-era Mission Control Center, where visitors will be able to experience flight control as it was during the missions to the Moon in the late 1960s and early 1970s. Authentic consoles and voice and data tapes from past space missions will be used to show visitors how data is displayed and acted upon, and guests will be able to learn how flight operations have been conducted at JSC since 1964.

Other planned exhibits include the full-scale trainer version of the Skylab Orbital Workshop. The trainer is one of two full scale working mockups in existence--the other is housed at the National Air and Space Museum in Washington, D.C.

Also planned are educational displays on the Space Shuttle, the Space Station, spacesuits, the history of flight and the history of the universe. The complex also will house JSC's growing collection of original space artwork.

The manned space flight artifact collection at JSC includes a flight-article Saturn V booster (which will not be moved from its present location in JSC's Rocket Park), the Apollo 17 Command Module that took Eugene Cernan, Harrison Schmitt and Ronald Evans to the Moon in 1972, Gordon Cooper's Mercury capsule, known as Faith 7, and the Gemini 5 spacecraft which took Cooper and Charles P. Conrad into orbit for eight days in August 1965. The

JSC collection also includes LTA-8, a Lunar Module test article which is one of two remaining from the Apollo Program. The other Lunar Module is housed at the Air and Space Museum.

JSC, the repository for approximately 80 percent of the U.S. lunar materials collection, also counts among its artifacts several Moon rocks. Two samples, collected during the Apollo 12 and Apollo 15 missions, are on display in the present Visitor Center. A third sample, known as the Touchstone, is encased in lucite in such a way as to allow visitors to touch a portion of this rock from another world. The Smithsonian displays the only other touchstone in existence.

Bus tours will provide visitors with access to the space center proper, including the Lunar Sample Building, the Mission Control Center, and the Mockup and Training Facility where astronauts train in full-scale Space Shuttle--and, in the future, Space Station--mockups.

The MOU, signed by JSC Director Aaron Cohen and Foundation Chairman William R. Kelly, charges the foundation with the responsibility to oversee construction and operation of the Visitor Center for JSC.

The foundation board of directors consists of eleven members, six of whom are Johnson Space Center officials, and five of whom represent the private sector. In addition to Kelly, who

is JSC Director for Center Support, other JSC members of the Board are Space and Life Sciences Director Dr. Carolyn L. Huntoon; Deputy Personnel Officer Harvey L. Hartman; Safety Division Chief Charles F. Bolden, Jr., a NASA astronaut; Mission Operations Assistant Director John W. O'Neill and Center Operations Deputy Director Grady McCright.

Dr. Christopher C. Kraft, Jr., former Director of JSC, was the first person from the private sector named to the foundation board. Other members are Joe M. Bailey, Chairman and Chief Executive Officer of InterFirst Bank Houston; Thad T. Hutcheson, Jr., Senior Partner in the law firm Baker & Botts; Joseph W. Van Trump, President of the advertising firm Mojo MDA - Allen & Dorward; and John E. Walsh, Jr., President of Friendswood Development Co.

President and chief operating officer of the foundation is JSC Public Affairs Director Harold S. Stall, who will oversee day-to-day operations of the Visitor Center along with Vice President/Secretary Charles A. Biggs, who is Chief of Public Services at JSC. Treasurer of the foundation is Nancy G. Robertson, program analyst in the Space Station Project Control Office.

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Brian Welch
RELEASE NO. 87-017

MOU TO GOVERN OPERATION OF JSC VISITOR CENTER

The Manned Space Flight Education Foundation, Inc., will oversee the construction and operation of the new visitor complex at the Johnson Space Center under the terms of a memorandum of understanding (MOU).

The MOU, signed by Johnson Space Center (JSC) Director Aaron Cohen and Foundation Chairman William R. Kelly, will define the mutual roles of JSC and the foundation for a period of 30 years.

The foundation, a Texas non-profit corporation chartered in July 1986, will bear the entire cost of construction, maintenance and operation of the Visitor Center complex with funding from the private sector. No federally appropriated funds will be used either in construction or operation of the complex.

Under the agreement, a license was granted by JSC to the foundation for use of a 123-acre tract that is now part of the Federal reservation that comprises the space center. Title to the property will remain with the U.S. Government. Title to the structures and other facilities of the Visitor Center will be vested in the foundation.

The agreement grants the foundation all rights of commerce at the center. In exchange for those rights, the foundation will compensate the NASA Exchange-JSC, the center's employee activities organization, through a direct payment of \$700,000 annually.

Under the provisions of the MOU, the foundation will:

- 0 Submit site and building plans to the JSC Deputy Director for review and approval.
- 0 Select and supervise construction and operations contractors.
- 0 Provide office space for JSC Civil Service and contractor personnel at the new complex as deemed necessary by JSC.
- 0 Submit an annual site operations and maintenance plan to the JSC Deputy Director.
- 0 Obtain prior approval from the space center before entering into any third party agreements which involve use of the Visitor Center for events which are not strictly educational or informational (such as promotional, publicity-related or some community events).
- 0 Submit to JSC a plan for security arrangements for Government-loaned property and displays.
- 0 Provide first priority consideration to JSC for the scheduling of meetings, conferences and other similar activities.
- 0 Provide JSC, upon written request, access to corporate records.
- 0 Obtain prior approval from JSC before embarking on any future phases of construction.
- 0 Replace the current Security Control Center, Bldg. 100, at a location to be designated by JSC.
- 0 Provide free access to the Visitor Center to official visitors when accompanied by JSC protocol officers.

0 Provide 1,000 Visitor Center passes annually to the JSC Director for use as he deems appropriate.

The agreement also details responsibilities of JSC. Under those provisions, the space center will:

0 Provide a license to the foundation for use of the 123-acre tract that lies in the extreme southwest corner of the 1620-acre JSC site.

0 Provide equipment, items and other property for displays and exhibits.

0 Make available the expertise of JSC personnel from a wide range of disciplines on a mission noninterference basis.

0 Review site and building plans of the foundation to assure architectural conformity with existing JSC facilities.

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NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center
Houston, Texas 77058
AC 713 483-5111

For Release

John Lawrence
RELEASE NO. 87-018

April 15, 1987

CHIEF ASTRONAUT JOHN YOUNG APPOINTED TO NEW POST

John W. Young today was appointed by JSC Director Aaron Cohen as Special Assistant to the Center Director for Engineering, Operations and Safety.

In his new position, Young will have direct and immediate access to the Center Director and other senior managers to aid in the timely definition and resolution of issues affecting the safe return to flight of the Space Shuttle.

Cohen said, "John Young's acceptance of this new responsibility will strengthen the link between operational and engineering elements at the Johnson Space Center. John's extensive flight experience coupled with his engineering background and his solid judgment on flight safety will be particularly important in returning the Shuttle to flight status."

Young will also advise the Center Director on engineering, operational and safety aspects of Space Station and new initiatives such as the second generation shuttle and the national aerospace plane.

As the United States' most experienced astronaut, with six space missions spanning the Gemini, Apollo and Space Shuttle eras, Young will remain eligible to command future Shuttle astronaut crews.

Henry Hartsfield, Deputy Chief of the Astronaut Office, will assume Young's Astronaut Office duties until his permanent successor is selected, which is expected to be announced in the next few weeks.

Young, 56, has been Chief of the Astronaut Office since January 1974. He was among the second group of astronauts selected by NASA in September 1962. He is a retired captain in the U.S. Navy.

-end-

NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

For Release

Terry White (713/483-8649)
RELEASE NO: 87-019

April 20, 1987

NOTICE TO EDITORS:

JOHNSON SPACE CENTER HOSTS AEROSPACE MECHANISMS SYMPOSIUM

The 21st Aerospace Mechanisms Symposium will be held at the NASA Johnson Space Center, Houston, April 29 through May 1, 1987.

Sponsored jointly by the National Aeronautics and Space Administration, California Institute of Technology and Lockheed Missiles & Space Company, the symposium will cover the latest technology in large space structures, robotics, space mechanisms and materials. NASA and U.S. aerospace industry engineers as well as European and Japanese engineers will take part.

All sessions and panel discussions will be in the Center's main auditorium.

Aerospace reporters may cover the symposium at no cost. Evening social events are at individual expense.

A symposium program is enclosed.

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Lyndon B. Johnson Space Center
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AC 713 483-5111

For Release

Steve Nesbitt
RELEASE NO. 87-020

NOTICE TO EDITORS:

JSC SCHEDULES LONG-DURATION SIMULATION

A simulation of the first 56 hours of the next Space Shuttle mission is scheduled for April 28-30 at the Johnson Space Center.

The STS-26 timeline and payload will be used, but flight crew members will not be those selected for the first flight since the Challenger accident. The prime goal of the simulation is to exercise the people and the processes necessary to support next year's mission.

The integrated simulation between astronauts in the Shuttle Mission Simulator and flight control teams in the Mission Control Center will begin at 9 a.m. CDT, with launch scheduled at 9:09 a.m. Deployment of the payload, a Tracking and Data Relay Satellite, is scheduled for 3:15 p.m., 6 hours and 6 minutes after launch. The simulation will end no later than 5 p.m., April 30.

Flight controllers will support the simulation around-the-clock in MCC, but the flight crew will not remain in the SMS during sleep periods. Flight director change-of-shift news briefings are planned for 12:20 p.m. on April 28 and 11:45 p.m. on April 29 and 30 if media interest warrants them.

Flight crew members are Michael L. Coats, commander; John E. Blaha, pilot; and Anna L. Fisher, James F. Buchli and Robert C. Springer, mission specialists.

Lead flight director is Charles W. Shaw, who will head the orbit 2 team. Other flight directors are Ronald D. Dittimore, ascent and orbit 1 team; and James M. Heflin, planning team.

Coats, Shaw and C. Stokes McMillan, simulation supervisor, will participate in a news briefing concerning the simulation at 2 p.m., Monday, April 27, in Room 135 of the JSC News Center, Building 2.

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4-27-87

NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

John Lawrence
RELEASE NO. 87-021

For Release:
April 27, 1987

KEY ASTRONAUT ASSIGNMENTS

Four astronauts have been assigned to key posts in the Flight Crew Operations Directorate and Astronaut Office at NASA's Johnson Space Center, Houston.

Newly assigned are Henry W. Hartsfield, Deputy Director for Flight Crew Operations; Daniel C. Brandenstein (Capt., USN), Chief of the Astronaut Office; Karol J. Bobko (Col., USAF), Assistant for Operations to the Director, Flight Crew Operations; and Steven A. Hawley, Ph.D., Deputy Chief of the Astronaut Office.

Hartsfield was formerly Deputy Chief of the Astronaut Office and succeeds Brandenstein as Deputy for Flight Crew Operations. The organization includes as its major elements the Aircraft Operations Division, Vehicle Integration Test Office, Payload Specialist Liaison Office and the Astronaut Office. His Space Shuttle experience is as pilot of Columbia on STS-4, June 1982; commander of Discovery on 41-D in August, 1984; and commander of Challenger's Mission 61-A, October 1985.

Brandenstein replaces John W. Young, Chief Astronaut since 1974, who was recently appointed Special Assistant to the Center Director. Brandenstein has served as Deputy Director of Flight Crew Operations for the past year. He flew as pilot of Challenger on STS-8 in August 1983, and then as commander of Discovery on Mission 51-G, June 1985. He was also capsule communicator in Mission Control during the ascent and on-orbit phases of the first Space Shuttle flight in April 1981.

Bobko's newly-created position of Assistant for Operations carries responsibility for overseeing issues in the Space Transportation System during the effort to return to flight and the subsequent period of increasing operational activities.

Hawley replaces Hartsfield as Deputy Chief of the Astronaut Office. He flew as mission specialist on 41-D with Hartsfield in 1984, and aboard Columbia on Mission 61-C in January 1985.

The appointments are effective immediately and the astronauts concerned remain on flight status.

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John Lawrence
RELEASE NO. 87-022

For Release
April 28, 1987

FIVE MORE PROSPECTIVE ASTRONAUT CANDIDATES INTERVIEWED

A review of applications has resulted in invitations to five additional prospective astronaut candidates who are at NASA's Johnson Space Center, Houston, this week, undergoing testing, interviews and indoctrination.

This sixth and final group brings to 117 the total invited to JSC. Selections are expected to be announced later this spring with successful candidates reporting to JSC for duty during the summer. A one-year period of candidacy precedes appointment as an astronaut.

The group consists of E. Deborah Elek (Capt., USMC), Yuma, Ariz.; Alan B. Lerchbacker (Lt. Cdr., USN), Annapolis, Md.; Andrew D. Mechling (Lt. Cdr., USN), Atsugi, Japan; Ernest E. Smith, Jr., Pearland, Tx.; and David R. Bryant (Lt. Cdr., USN), San Diego, Calif.

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(Note to Editors: Ernest E. Smith, Jr., 36, of Pearland, is Head of the Requirements Management Sections of the Mission Operations Directorate at JSC. He was born in Houston, attended Milby High School here, and has a bachelor's degree in mechanical engineering from Rice University.)

ASTRONAUT CANDIDATE PROGRAM INTERVIEWS

Week of April 26, 1987

Name: CAPT E. Deborah Elek, USMC PLT___MS_X_
Born: Brooklyn, NY High School: Central Islip HS, Central Islip, NY
Degree(s): Biology, New York U. Education, USC.
Current Residence: Yuma, AZ
Stationed at: Marine Corps Air Station, Yuma, AZ

Name: LCDR Alan B. Lerchbacker, USN PLT___MS_X_
Born: Cleveland, OH. High School: Elyria Catholic HS, Elyria, OH.
Degree(s): Mechanical Engineering, Naval Academy.
Mechanical Engineering, Naval Postgraduate School
Current Residence: Annapolis, MD **Stationed at:** Naval Academy

Name: LCDR Andrew D. Mechling, USN PLT_X_MS____
Born: Peekskill, NY. High School: Yorktown HS, Arlington, VA.
Degree(s): Oceanography, Naval Academy.
Aeronautical Systems, U of West Florida.
Current Residence: Atsugi, Japan **Stationed at:** Atsugi, Japan

Name: Ernest E. Smith, Jr. **Born:** 11-18-50 PLT____MS_X_
Born: Houston, TX High School: Milby HS, Houston TX
Degree(s): Mechanical Engineering, Rice University
Current Residence: Pearland, TX.
Employed by: Johnson Space Center since April 1978.
Head, Requirements Management Section, Mission Operations
Directorate

Name: LCDR David R. Bryant, USN

FLT_X_MS____

Born: Castle AFB, CA. High School: Camden HS, San Jose, CA.

Degree(s): Physics & Math, San Jose State U. Physics, U of Toledo.
Aeronautical Systems, U of West Florida

Current Residence: San Diego, CA.

Stationed at: Fighter Squadron 211, FPO San Francisco.

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AC 713 483-5111

For Release

Terry White
RELEASE NO. 87-023

May 15, 1987

SPACE STATION FLOW CYTOMETRY WORKSHOP HELD AT LOS ALAMOS LABORATORY JUNE 1-3

Flow cytometry specialists from NASA and several other organizations will meet in a workshop June 1-3 at the Los Alamos National Laboratory, Los Alamos, New Mexico, to discuss needs for flow cytometry capability aboard Space Station.

Space life scientists and Technology Utilization specialists at the NASA Johnson Space Center will meet with representatives of the Los Alamos National Laboratory, American Cancer Society, and other American cytometry experts to share ideas on how best to design and build a flow cytometer for spaceflight. These organizations are workshop sponsors.

Flow cytometry employs electro-optical scanning of a stream of biological materials to identify and discriminate between individual living cells. Cytometry also is used to sort chromosomes and to detect malignant cells by measuring protein and DNA content.

A flow cytometer for Space Station would have to be light and rugged; be one-tenth the size of commercial cytometers; be simple to operate and maintain; be capable of analyzing as many as eight measurements; use a safe, low-power light source, and accept add-on modules. Development of a compact space flow cytometer is expected to have potential earthbound applications.

- 30 -

NOTE TO MEDICAL/SCIENCE EDITORS: The Flow Cytology Workshop is open to media coverage and will be in the Los Alamos Laboratory Oppenheimer Study Center. Los Alamos media contacts are Barbara Mulkin or John Webster, 505/667-7000.

NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

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For Release

Kelly Humphries
Release No. 87-024

May 14, 1987

NEBRIG APPOINTED EXECUTIVE ASSISTANT TO DIRECTOR

Daniel A. Nebrig has been appointed Executive Assistant to the Director of the Lyndon B. Johnson Space Center (JSC), Houston, Texas.

Nebrig, 52, of Seabrook, Texas, will share responsibility for managing the center's institutional affairs, fiscal and budgetary operations, facilities and manpower. He will also serve as liaison between technical and administrative operations at the center. He formerly was Deputy Director of Administration.

Nebrig joined JSC in August 1963 in the Apollo Spacecraft Program Office and was Senior Project Engineer for Apollo 7; the first manned Apollo flight.

He was Executive Assistant to the Associate Administrator for Space Flight at NASA Headquarters from 1976 to 1978.

Back at JSC, Nebrig served as Manager of the Space Shuttle Orbiter Project Control Office from 1978 to 1982, and Manager of the Space Shuttle Program Control Office from 1982-1983.

Nebrig's awards include the Presidential Medal of Freedom, Apollo 13 Team, 1970; NASA Exceptional Service Medal, 1981; Special Achievement Awards, 1980 and 1982, and Superior Achievement Awards, 1968 and 1970.

Born in Decatur, Alabama, Nebrig received a bachelor's degree in Aeronautical Engineering from Auburn University in 1957. He is married to the former Ann VanArsdale, also of Decatur.

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Leon Perry
Headquarters, Washington, D.C.

For Release
May 26, 1987

Steve Nesbitt
Johnson Space Center, Houston, TX
Release No. 87-025

JSC TO STUDY LUNAR BASE USES AND REQUIREMENTS

Five one-year studies of how a base on the moon could be built and operated and an assessment of its uses and benefits will be conducted under contracts or grants administered by the NASA Johnson Space Center in Houston. Over \$1.2 million is expected to be spent in the effort during the next year.

NASA is considering development of a lunar base as one of four candidate initiatives that could become the focus for the agency's next program beyond the space station.

Two of the studies to be conducted "in-house" using civil service and contractor manpower at JSC, will deal with utilization of a moon base and advanced lunar transportation. The total value of the effort is estimated at \$578,000.

Additional studies will define lunar base systems, develop a computer model which incorporates the elements of the Space Transportation System (Shuttle, Space Station and expendable

-more-

rockets) along with lunar base elements and construction requirements, and analyze concepts for space vehicles which are propelled by other than chemical rockets.

The lunar base systems definition contract valued at approximately \$438,000 is expected to be awarded in early summer. The Large Scale Programs Institute and the University of Texas at Austin will receive in July a \$135,000 grant for the computer model development, and the California Space Institute of the University of California at San Diego will receive a \$75,000 grant June 1 for the alternate space vehicles study.

Other future NASA programs under consideration include a manned mission to Mars, a significantly expanded unmanned planetary exploration program, and an expanded, intensive investigation of the Earth from space.

Recent NASA strategic planning has considered the possibility of establishing a significant scientific outpost on the Moon by the year 2005.

The rationale behind creation of a lunar base includes the establishment of the next generation of planetary science, astronomical and other research facilities in space, development of the natural resources of the Moon for use in space, and use of the lunar initiative as a "test bed" for the technologies which

will enable humans to live away from Earth for extended periods without total dependence on Earth.

The Moon represents the closest source of materials outside of the Earth. Materials can be transported into space from the Moon for about 5% of the energy required for transporting the same materials from Earth.

The Moon is relatively rich in certain elements, specifically oxygen, silicon, iron, calcium, aluminum and magnesium. A permanent lunar base can be created to access and utilize these resources to support the growing space infrastructure, minimizing the resources needed from Earth, thus lowering the overall operational costs of many space activities.

Many astronomers believe that the Moon would be a prime location for certain astronomical observations. The Moon's hard vacuum, low gravity, stable thermal environment, permanently shaded polar regions and very low magnetic field could simplify many experiments that would be difficult to accomplish on the Earth or in free space.

The JSC lunar base studies represent second-level definition of the lunar base elements and Earth-to-lunar transportation systems that have been identified in previous studies.

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NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

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AC 713 483-5111

For Release

Terry White
RELEASE NO. 87-026

May 28, 1987

JOHNSON SPACE CENTER HOSTS LUNAR SOIL PLANT GROWTH WORKSHOP

Space scientists and agricultural experts from NASA and academia will meet June 1-2, 1987 at the NASA Johnson Space Center Houston in a workshop on "Lunar Derived Soils for Growth of Higher Plants."

In the 18 years since the first bits of moon rocks and soil were brought back from Tranquillity Base by the Apollo 11 crew, space scientists have pondered whether lunar soil, or regolith, would grow edible plants to help feed crews of future moon bases. Investigators at Johnson's Lunar Receiving Laboratory successfully grew corn seedlings in Apollo lunar soil samples.

Exploitation of lunar soil nutrients needed for practical lunar surface crop cultivation calls for new technology to control the harsh lunar environment.

Concepts for Controlled Ecological Life Support Systems---greenhouse shelters on the moon in which lunar soil might be tilled to yield vegetables for a moon base cafeteria---will be a major workshop topic.

The workshop starts at 8:30 am CDT June 1 at JSC's Gilruth Recreation Facility.

NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

Houston, Texas 77058
AC 713 483-5111

For Release

Sarah Keegan
Headquarters, Washington, D.C.
(Phone: 202/453-8536)

June 2, 1987

Barbara Schwartz
Johnson Space Center, Houston, TX
Release No. 87-027

NASA AWARDS CONTRACT FOR ORBITER ARRESTING SYSTEM

NASA Johnson Space Center has awarded a two-step contract to All American Engineering (AAE) Corp. of Newark, Delaware, to develop an Orbiter Arresting System (OAS) to provide emergency stopping capability.

The arresting system is an adaptation of military arresting equipment that AAE has designed, manufactured, and installed in 32 countries worldwide to minimize aircraft damage in the event of a landing emergency.

The basic system uses a multi-element nylon net to capture the vehicle and distribute dynamic loads. Energy absorbers attached to the net are located on either side of the runway and control runout distance and deceleration rate. The OAS will accommodate any projected landing weight at ground speeds up to 100 knots. The energy absorber system allows a 1000-foot runout distance after the Orbiter contacts the net.

A test program utilizing the Orbiter Enterprise to validate the net design is planned for June 8-12, 1987, at Dulles Airport, Virginia. The test also will be used to examine and identify the net/Orbiter interface areas and to determine the net load pattern distribution applied to the Orbiter.

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NASA News

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

Steve Nesbitt
RELEASE NO. 87-028

For Release

Immediate
June 5, 1987

NASA SELECTS 15 NEW ASTRONAUT CANDIDATES

The National Aeronautics and Space Administration today announced the selection of 15 new astronaut candidates for the Space Shuttle program.

Seven are pilot astronaut candidates and eight are mission specialist candidates. They will report to NASA's Johnson Space Center in Houston Aug. 17 to begin a year-long program of training and evaluation. Subsequently, successful candidates will begin training assignments leading to selection for Space Shuttle flight crews.

The candidates include five civilians and 10 military officers. Two of the mission specialist candidates are women, including one minority. Of the five civilians selected, three are current employees of the Johnson Space Center and one is employed by NASA's Marshall Space Flight Center.

NASA received 1,962 applications, from which 117 persons were interviewed and given medical examinations at the Johnson Space Center.

A listing of candidates and their biographical data follows:

-more-

LIST OF ASTRONAUT CANDIDATES

Capt. Thomas D. Akers	U.S. Air Force	Mission Specialist
Capt. Andrew M. Allen	U.S. Marine Corps	Pilot
Lt. Kenneth D. Bowersox	U.S. Navy	Pilot
Capt. Curtis L. Brown, Jr.	U.S. Air Force	Pilot
Maj. Kevin P. Chilton	U.S. Air Force	Pilot
Dr. Jan D. Dozier	Civilian	Mission Specialist
Dr. C. Michael Foale	Civilian	Mission Specialist
Gregory J. Harbaugh	Civilian	Mission Specialist
Dr. Mae C. Jemison	Civilian	Mission Specialist
Maj. Donald R. McMonagle	U.S. Air Force	Pilot
^{Cdr.} Lcdr. Bruce E. Melnick	U.S. Coast Guard	Mission Specialist
William F. Readdy	Civilian	Pilot
Lcdr. Kenneth S. Reightler, Jr.	U.S. Navy	Pilot
Lcdr. Mario Runco, Jr.	U.S. Navy	Mission Specialist
Maj. James S. Voss	U.S. Army	Mission Specialist

-more-

NAME: Thomas D. Akers, Captain, USAF, Mission Specialist

BIRTHDATE

AND PLACE: May 20, 1951 - St. Louis, Missouri

CURRENT

RESIDENCE: Niceville, Florida

EDUCATION:

Eminence High School, Eminence, Missouri
BS, Applied Math, Univ. of Missouri-Rolla, 1973
MS, Applied Math, Univ. Of Missouri-Rolla, 1975

PRESENT

POSITION: Executive Officer for Research, Development
and Acquisition
HQ Armament Division
Eglin AFB, Florida

PARENTS:

Walter Akers, Deceased
Archie Akers Randolph, Eminence, Missouri

NAME: Andrew M. Allen, Captain, USMC, Pilot

BIRTHDATE

AND PLACE: August 4, 1955 - Philadelphia, Pennsylvania

CURRENT

RESIDENCE: Hollywood, Maryland

EDUCATION:

Archbishop Wood High School, Warminster, Pennsylvania
BS, Mechanical Engineering, Villanova Univ., 1977

PRESENT

POSITION: Test Pilot Under Instruction
U.S. Naval Test Pilot School
Patuxent River, Maryland

PARENTS: Mr. & Mrs. Charles A. Allen, Richborough, Pennsylvania

NAME: Kenneth D. Bowersox, Lieutenant, USN, Pilot
BIRTHDATE
AND PLACE: November 14, 1956 - Portsmouth, Virginia
CURRENT
RESIDENCE: Ridgecrest, California
EDUCATION: Bedford High School, Bedford, Indiana
BS, Aerospace Engineering, U.S. Naval Academy, 1978
MS, Mechanical Engineering, Columbia Univ., 1979
PRESENT
POSITION: Project Pilot
Naval Weapons Center
China Lake, California
PARENTS: Mr. & Mrs. Ronald G. Bowersox, Bedford, Indiana

NAME: Curtis L. Brown, Jr., Captain, USAF, Pilot
BIRTHDATE
AND PLACE: March 11, 1956 - Elizabethtown, North Carolina
CURRENT
RESIDENCE: Niceville, Florida
EDUCATION: East Balden High School, Elizabethtown, North Carolina
BS, Electrical Engineering, U.S. Air Force Academy, 1978
PRESENT
POSITION: Director, A-10 Tests
3247 Test Squadron
Eglin AFB, Florida
PARENTS: Curtis L. Brown, Sr., Deceased
Rachel H. Brown, Elizabethtown, North Carolina

NAME: Kevin P. Chilton, Major, USAF, Pilot

BIRTHDATE November 3, 1954 - Los Angeles, California
AND PLACE:

CURRENT
RESIDENCE: Shalimar, Florida

EDUCATION: St. Bernard High School, Playa del Rey, California
BS, Engineering Science, U.S. Air Force Academy, 1976
MS, Engineering Mechanics, Columbia Univ., 1977

PRESENT
POSITION: Operations Officer
3247 Test Squadron
Elgin AFB, Florida

PARENTS: Mr. and Mrs. James P. Chilton, Los Angeles, California

NAME: Jan D. Dozier, Ph.D., Mission Specialist

BIRTHDATE
AND PLACE: November 1, 1953 - Patrick AFB, Florida

CURRENT
RESIDENCE: Huntsville, Alabama

EDUCATION: Huntsville High School, Huntsville, Alabama
BS, Biology, Georgia Tech, 1975
BS, Mechanical Engineering, Auburn Univ., 1977
MS, Mechanical Engineering, Univ. of Alabama, 1983
PhD, Mechanical Engineering, Univ. of Alabama, 1985

PRESENT
POSITION: Aerospace Engineer
Structures Engineering Branch
Marshall Space Flight Center, Alabama

PARENTS: Benjamin F. Smotherman, Ft. Worth, Texas
Dolly Jo Davis, Huntsville, Alabama

NAME: C. Michael Foale, Ph.D., Mission Specialist

BIRTHDATE
AND PLACE: January 6, 1957 - Louth, England

CURRENT
RESIDENCE: Seabrook, Texas

EDUCATION: Kings School, Canterbury, England
BA, Physics, Cambridge Univ., 1978
MA, Physics, Cambridge Univ., 1982
PhD, Physics, Cambridge Univ., 1982

PRESENT
POSITION: Payload Officer
Operations Division
Johnson Space Center
Houston, Texas

PARENTS: Mr. and Mrs. Colin H. Foale, Cambridge, England

NAME: Gregory J. Harbaugh, Mission Specialist

BIRTHDATE
AND PLACE: January 15, 1956 - Cleveland, Ohio

CURRENT
RESIDENCE: Houston, Texas

EDUCATION: Willoughby South High School, Willoughby, Ohio
BS, Aero and Astro Engineering, Purdue, Univ., 1978
MS, Physical Science, U. of Houston-Clear Lake, 1986

PRESENT
POSITION: Manager, Schedules and Flow Office
Mission Operations Directorate
Johnson Space Center
Houston, Texas

PARENTS: Thomas Harbaugh, Deceased
Alice Harbaugh, Miami, Florida

NAME: Mae C. Jemison, M.D., Mission Specialist

BIRTHDATE

AND PLACE: October 17, 1956 - Decatur, Alabama

CURRENT

RESIDENCE: Los Angeles, California

EDUCATION: Morgan Park High School, Chicago, Illinois
BS, Chemical Engineering, Stanford Univ., 1977
MD, Cornell Univ., 1981

PRESENT

POSITION: General Practitioner
Cigna Healthplans of California
Glendale, California

PARENTS: Mr. & Mrs. Charlie Jemison, Chicago, Illinois

NAME: Donald R. McMonagle, Major, USAF, Pilot

BIRTHDATE

AND PLACE: May 14, 1952 - Flint, Michigan

CURRENT

RESIDENCE: Henderson, Nevada

EDUCATION: Michael Hamady High School, Flint, Michigan
BS, Astronautical Engineering, U.S. Air Force Academy,
1974
MS, Mechanical Engineer, California State Univ.-Fresno,
1985

PRESENT

POSITION: Operations Officer
6513th Test Squadron
Edwards AFB, California

PARENTS: Mr. & Mrs. Joseph M. McMonagle, DeLeon Springs, FL

NAME: Bruce E. Melnick, Lt. Cmdr., USCG, Mission Specialist

BIRTHDATE

AND PLACE: December 5, 1949 - New York, New York

CURRENT

RESIDENCE: Traverse City, Michigan

EDUCATION:

Clearwater High School, Clearwater, Florida
BS, Ocean Engineering, U.S. Coast Guard Academy, 1972
MS, Aeronautical Systems, Univ. of West Florida, 1975

PRESENT

POSITION: Operations Officer
U.S. Coast Guard Air Station
Traverse City, Michigan

PARENTS: Edward S. Melnick, Ft. White, Florida
Rita M. Melnick, Deceased

NAME: William F. Readdy, Pilot

BIRTHDATE

AND PLACE: January 24, 1952 - Quonset Point, Rhode Island

CURRENT

RESIDENCE: Seabrook, Texas

EDUCATION:

McLean High School, McLean, Virginia
BS, Aeronautical Engineering, U.S. Naval Academy, 1974

PRESENT

POSITION: Aerospace Engineer and Pilot
Aircraft Operations Division
Johnson Space Center
Houston, Texas

PARENTS: Francis J. Readdy, McLean, Virginia
Peggy J. Readdy, Deceased

NAME: Kenneth S. Reightler, Jr., Lt. Cmdr., USN, Pilot

BIRTHDATE

AND PLACE: March 24, 1951 - Patuxent River, Maryland

CURRENT

RESIDENCE: Lexington Park, Maryland

EDUCATION: Bayside High School, Virginia Beach, Virginia
BS, Aerospace Engineering, U.S. Naval Academy, 1973
MS, Systems Management, Univ. of Southern
California, 1984
MS, Aeronautical Engineering, Naval
Postgraduate School, 1984

PRESENT

POSITION: Chief Flight Instructor
U.S. Naval Test Pilot School
Patuxent River, Maryland

PARENTS: Mr. & Mrs. Kenneth S. Reightler, Sr.,
Virginia Beach, Virginia

NAME: Mario Runco, Jr., Lt. Cmdr., USN, Mission Specialist

BIRTHDATE

AND PLACE: January 26, 1952 - Bronx, New York

CURRENT

RESIDENCE: Aiea, Hawaii

EDUCATION: Cardinal Hayes High School, Bronx, New York
BS, Meteorology, City College of New York, 1974
MS, Meteorology, Rutgers Univ., 1976

PRESENT

POSITION: Fleet Liaison Officer
Naval Western Oceanography Center
Pearl Harbor, Hawaii

PARENTS: Mr. & Mrs. Mario E. Runco, Sr., Yonkers, New York

NAME: James S. Voss, Major, USA, Mission Specialist

BIRTHDATE

AND PLACE: March 3, 1949 - Cordova, Alabama

CURRENT

RESIDENCE: Houston, Texas

EDUCATION: Opelika High School, Opelika, Alabama
BS, Aerospace Engineering, Auburn Univ., 1972
MS, Aerospace Engineering, Univ. of Colorado, 1974

PRESENT

POSITION: Operations Integration Officer
Vehicle Integration Office
Johnson Space Center
Houston, Texas

PARENTS: James L. Wright (Grandfather), Opelika, AL

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NASA News

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

For Release

Steve Nesbitt
RELEASE NO. 87-029

June 26, 1987

NASA EXTENDS CONTRACT FOR SHUTTLE FLIGHT SIMULATOR SUPPORT

The NASA Johnson Space Center in Houston has recently completed negotiations with the Singer Company, Link Flight Simulation Division, extending the contract for support of the Space Shuttle flight simulation complex.

The work includes development support and upgrades to the complex in which astronauts train to fly the space shuttle. Value of the cost-plus-award-fee extension from July 1, 1987 to December 31, 1988 is \$15,485,337.

Funding of \$4,787,569 to cover work added by NASA under the contract schedule ending June 30, 1987 also was negotiated with Singer.

The contract with the Singer company for flight simulator development began in 1976.

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NASA News

National Aeronautics and
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Houston, Texas 77058

AC 713 483-5111

For Release

Terry White
RELEASE NO. 87-030

July 14, 1987

POHL NAMED TO RECEIVE ASME WESTINGHOUSE GOLD MEDAL

Johnson Space Center director of engineering Henry O. Pohl, 54, has been named by the American Society of Mechanical Engineers to receive the Society's 1987 George Westinghouse Gold Medal.

Selected for his "outstanding engineering ability, leadership, and management skills, evident in the development of the superb propulsion and power systems of United States manned spacecraft," Pohl will receive the medal at the ASME Joint Power Generation Conference in Miami October 4-8, 1987.

Pohl was named director of engineering at JSC in 1986 after serving six years as chief of the center's power and propulsion division. Earlier he filled junior division management positions.

Pohl transferred to JSC in 1962 from the NASA Marshall Space Flight Center, Huntsville, Alabama where he was involved in liquid rocket engine development. From 1957 to 1959, he was a test engineer with the Army Ballistic Missile Agency at Redstone Arsenal, Alabama.

Born in Lockhart, Texas, Pohl graduated from Texas A&M University in 1956. He is a member of the American Institute of Aeronautics and Astronautics, and was twice awarded the NASA Exceptional Service Medal.

NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

Kyle Herring
RELEASE NO. 87-031

For Release
August 11, 1987

ARKANSAS SPACE AMBASSADOR BRIEFED AT JSC

Space Ambassadors in the National Aeronautics and Space Administration's Teacher in Space Project, including Beth Greenway of Little Rock, recently attended a two-day tour of the Johnson Space Center in Houston, Texas, to assist them in the presentation of aerospace-related subjects to their respective communities and students.

Greenway teaches twelfth grade English at Parkview High School in Little Rock. Since her selection as one of Arkansas' Teacher in Space Ambassadors, Greenway has given presentations to area schools and community organizations about her experiences in the space program.

"One of my favorite lines of poetry is 'to strive, to seek, to find, and not to yield' from Alfred, Lord Tennyson's nineteenth century poem 'Ulysses.' I see the space program as the logical extension of the spirit of these words," Greenway said, adding that "space inspires and challenges everyone."

The ambassadors toured facilities including mockups for both the Skylab and future low-Earth orbiting Space Station. Skylab was used in 1973 and '74 to conduct scientific experiments in the weightless environment of space. The Space Station mockup displays the latest full-scale design configuration of a habitation module where the astronaut crew would live and eat with a connecting node allowing additional laboratory modules to be joined. NASA plans to have a permanently-manned facility in space by mid-1996.

Also included in the tour were the Mission Control Center from which manned space missions are controlled after launch; the Crew Compartment Trainer used by astronauts to train for some mission specific activities and the Weightless Environment Training Facility (WETF) used to train astronauts in mission work conducted outside the Shuttle orbiter. WETF is a large neutral buoyancy tank which simulates the weightlessness experienced in space.

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The tour of JSC followed a Teacher in Space national training conference for the NASA Space Ambassadors and other invited educators from around the U.S. held recently in New Orleans, La., and at NASA's National Space Technology Laboratories in southern Mississippi.

Greenway is available for presentations during the 1987-88 school year. To schedule a program in the Pulaski County area, write to her in care of Parkview High School, 2501 Barrow Road, Little Rock, Ark., 72204.

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NASA News

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

Kyle Herring
RELEASE NO. 87-032

For Release
August 11, 1987

VERMONT SPACE AMBASSADOR BRIEFED AT JSC

Space Ambassadors in the National Aeronautics and Space Administration's Teacher in Space Project, including Gail Breslauer of Moretown, recently attended a two-day tour of the Johnson Space Center in Houston, Texas, to assist them in the presentation of aerospace-related subjects to their respective communities and students.

Breslauer teaches a combined first and second grade class at the Fayston School in Fayston, Vermont. Since her selection as one of Vermont's Teacher in Space Ambassadors, Breslauer has given presentations to area schools and community organizations about her experiences in the space program.

"This is the path I have chosen to take because I believe in the importance of sharing my unique experiences, resources and knowledge," Breslauer said of her involvement in the space program. "I view myself not only as a Space Ambassador, but as an ambassador for education. Perhaps more students will consider entering the field of education as a career option."

The ambassadors toured facilities including mockups for both the Skylab and future low-Earth orbiting Space Station. Skylab was used in 1973 and '74 to conduct scientific experiments in the weightless environment of space. The Space Station mockup displays the latest full-scale design configuration of a habitation module where the astronaut crew would live and eat with a connecting node allowing additional laboratory modules to be joined. NASA plans to have a permanently-manned facility in space by mid-1996.

Also included in the tour were the Mission Control Center from which manned space missions are controlled after launch; the Crew Compartment Trainer used by astronauts to train for some mission specific activities and the Weightless Environment Training Facility (WETF) used to train astronauts in mission work conducted outside the Shuttle orbiter. WETF is a large neutral buoyancy tank which simulates the weightlessness experienced in space.

-more-

-2-

The tour of JSC followed a Teacher in Space national training conference for the NASA Space Ambassadors and other invited educators from around the U.S. held recently in New Orleans, La., and at NASA's National Space Technology Laboratories in southern Mississippi.

Breslauer is available for presentations during the 1987-88 school year. For more information or to schedule a program write RR 1, Box 1681, Moretown, Vt. 05660 or telephone (802) 496-3795.

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National Aeronautics and
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Kyle Herring
RELEASE NO. 87-033

For Release
August 11, 1987

NEW HAMPSHIRE SPACE AMBASSADOR BRIEFED AT JSC

Space Ambassadors in the National Aeronautics and Space Administration's Teacher in Space Project, including Robert Veilleux of Manchester, recently attended a two-day tour of the Johnson Space Center in Houston, Texas, to assist them in the presentation of aerospace-related subjects to their respective communities and students.

The ambassadors toured facilities including mockups for both the Skylab and future low-Earth orbiting Space Station. Skylab was used in 1973 and '74 to conduct scientific experiments in the weightless environment of space. The Space Station mockup displays the latest full-scale design configuration of a habitation module where the astronaut crew would live and eat with a connecting node allowing additional laboratory modules to be joined. NASA plans to have a permanently-manned facility in space by mid-1996.

Also included in the tour were the Mission Control Center from which manned space missions are controlled after launch; the Crew Compartment Trainer used by astronauts to train for some mission specific activities and the Weightless Environment Training Facility (WETF) used to train astronauts in mission work conducted outside the Shuttle orbiter. WETF is a large neutral buoyancy tank which simulates the weightlessness experienced in space.

The tour of JSC followed a Teacher in Space national training conference for the NASA Space Ambassadors and other invited educators from around the U.S. held recently in New Orleans, La., and at NASA's National Space Technology Laboratories in southern Mississippi.

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NASA News

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
Houston, Texas 77058
AC 713 483-5111

For Release:
August 13, 1987

Steve Nesbitt or
Kelly Humphries

NOTE TO EDITORS

The Media Services Branch at JSC has developed a new tool intended to give news media 24-hour access to detailed background information. The "JSC Electronic Newsroom" is a computerized bulletin board system that contains recent news releases, biographies of astronauts and other JSC officials, television schedules, flight manifests, mission press kits and Space News Roundup stories.

Accredited news media representatives may read and download files on the system by using their computers' communication capabilities. Although the system is still under development and all files are not yet available, the JSC Electronic Newsroom already contains all 1987 news releases issued from JSC and NASA Headquarters, several issues of Roundup stories and a number of biographies.

Communicating with the JSC Electronic Newsroom is fairly simple. Just follow these steps:

1. Set computer's communications package to use parameters of 8-1-None or 7-1-Even at 1200 Baud.
2. Use computer's communications package to dial 713-483-2500. JSC's telecommunications system will respond "ENTER NUMBER." Type 60214 (ENTER). (This bulletin board is reserved for news media, so please do not release the telephone number.)
3. JSC Electronic Newsroom will respond with prompts to fill in your first name, last name, city and state, and password. After you have responded to the prompts, you will be given access to the system bulletins that explain the JSC Electronic Newsroom and the JSC media accreditation process. After you have read the bulletins, sign off and at the next opportunity a system administrator will evaluate your access request and establish an appropriate access level.

A detailed guide to the JSC Electronic Newsroom is available from system operators Steve Nesbitt or Kelly Humphries.

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NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

Steve Nesbitt
RELEASE 87-035

For Release:
August 6, 1987

STATUS UPDATE: MISSION CONTROL CENTER WATER LEAK

The main computer complex at the NASA Johnson Space Center's Mission Control Building is expected to be back in operation Monday following cleanup of water which leaked from a broken pipe fitting Thursday morning.

A fitting on a chilled water line in the crawlspace between floors of the JSC Mission Control Center/Mission Operations Wing was broken around 9 a.m. Thursday by workers installing cables into the space.

Water leaked onto the first floor Real-Time Computer Complex where support personnel immediately covered computer equipment with plastic sheeting. The equipment was powered down as a precautionary measure.

It is not known whether there was any damage to the computer equipment which supports data processing for Space Shuttle missions and simulations.

After the equipment racks have been inspected to ensure they are dry, the computers will be powered up and tested beginning Friday morning. Integrated systems testing will begin as soon as individual units have been checked. Full operation of the control center is expected by Monday morning.

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NASA News

National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

Steve Nesbitt
RELEASE 87-036

For Release
August 7, 1987

9 A.M. CST STATUS UPDATE: MISSION CONTROL CENTER WATER LEAK

Technicians Friday morning began power-up and checkout of equipment in the main computer complex at the NASA Johnson Space Center's Mission Control Building following cleanup of water which leaked from a broken pipe fitting Thursday morning.

A detailed visual inspection was performed Thursday night in the Real-Time Computer Complex which indicated that very few computer cabinets had water on them and that none of the main processor units had any contact with water.

After the area was dried using fans and the humidity stabilized, power-up began Friday morning. Technicians hope to know by noon Friday whether there was any damage to equipment. Integrated systems testing will begin as soon as individual units have been checked. Full operation of the control center is expected by Monday morning.

A fitting on a chilled water line in the crawlspace between floors of the JSC Mission Control Center/Mission Operations Wing was broken around 9 a.m. Thursday by workers installing cables into the space.

Water leaked onto the first floor Real-Time Computer Complex where support personnel immediately covered computer equipment with plastic sheeting. The equipment was powered down as a precautionary measure.

The computers in the RTCC process data in support of Space Shuttle flights and simulations.

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NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

For Release:

Kyle Herring
RELEASE NO. 87-037

August 10, 1987

MATH, SCIENCE TEACHERS ATTEND NASA SPACE SCIENCE WORKSHOP

L. Kathleen Anderson, who teaches physics at Madill High School in Madill, Oklahoma, has completed a two-week workshop at the NASA Johnson Space Center in Houston, Texas for mathematics and science teachers.

Selected from an eight-state region covering North and South Dakota, Nebraska, Kansas, Oklahoma, Colorado, New Mexico and Texas, the 23 teachers met with engineers, scientists, astronauts and researchers at JSC for an overview of the latest space technology developments. Each teacher kept a journal of activities and observations to be used in building classroom teaching materials. The workshop was conducted from July 27-Aug. 7.

Space science education specialists at JSC also provided the teachers with printed materials, computer programs and audio-visual aids for use in classrooms.

Workshop participants were chosen for their interest in space sciences and in professional growth.

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Lyndon B. Johnson Space Center

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Steve Nesbitt
RELEASE 87-038

For Release
August 7, 1987

3 P.M. CST STATUS UPDATE: MISSION CONTROL CENTER WATER LEAK

Mission Control Center personnel were optimistic Friday afternoon that a water leak into the Real-Time Computer Complex on Thursday did little damage to the computer equipment which supports Space Shuttle missions and simulations.

By Friday afternoon all equipment in the RTCC had been powered on and initial checkout showed no apparent problems. Integrated testing was planned throughout the day and Saturday and the Mission Control Center was expected to be fully operational Monday morning.

A fitting on a chilled water line in the crawlspace between floors of the JSC Mission Control Center/Mission Operations Wing was broken around 9 a.m. Thursday by workers installing cables into the space.

Water leaked onto the first floor RTCC where support personnel immediately covered computer equipment with plastic sheeting. The equipment was powered down as a precautionary measure.

A detailed visual inspection was performed Thursday night which indicated that very few computer cabinets had water on them and that none of the main processor units had any contact with water.

The computers in the RTCC process data in support of Space Shuttle flights and simulations.

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NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center
Houston, Texas 77058
AC 713 483-5111

For Release

Kelly Humphries
RELEASE NO.: 87-039

August 11, 1987

ACCIDENT BOARD INVESTIGATES MCC WATER LEAK

An internal investigation board has been created at Johnson Space Center to look into the Aug. 6 water leak that prompted an emergency power-down of the Mission Control Center's Data Computation Complex (DCC).

Board Chairman James Moore, Assistant for Test Operations in the Crew and Thermal Systems Division, said a report is expected to be completed within 60 days. The board consists of Moore, from the Engineering Directorate; Matthew Cole, from the Safety, Reliability and Quality Assurance Directorate; Ray Loree, from the Mission Support Directorate; William Cowart, from the Center Operations Directorate; and James Saultz, from the Mission Operations Directorate.

A fitting on a chilled water line in the crawlspace between floors of the MCC/Mission Operations Wing was broken at 9:10 a.m. Aug. 6, by workers installing cables into the space. Water threatened equipment in the DCC, previously known as the Real-Time Computer Complex, which supports Space Shuttle missions and simulations. The cable installation work was part of a routine engineering activity to relocate equipment. Chilled water from a central heating and cooling plant is pumped through pipes in JSC buildings for air conditioning.

Quick response by DCC workers who covered the computers with plastic sheeting was credited with keeping damage at a minimum. A routine simulation of a Space Shuttle reentry and landing in progress in Flight Control Room 2 on the third floor was canceled when the accident occurred.

After the leak was stopped, the DCC area was dried and a detailed visual inspection performed. The inspection showed few computer cabinets had been in contact with water and no main processor units had been in contact with water. At 9 a.m. Aug. 7, technicians began to power up the equipment and perform subsystem checks. By 8 p.m. Aug. 8, integrated tests had been performed on the reconnected subsystems and the DCC was declared back to normal.

-end-

NASA News

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AC 713 483-5111

For Release

Douglas K. Ward
RELEASE NO. 87-041

September 10, 1987

LINDA SHIRLEY NAMED FEDERAL EMPLOYEE OF THE YEAR

Linda R. Shirley of Baytown has been honored as one of metropolitan Houston's outstanding federal employees.

The honor, one of the highest available to the 25,000 federal employees in this area, was presented by the Houston Area Federal Business Association and the Federal Executive Board during the annual employee recognition luncheon Sept. 9.

Shirley, the executive secretary for the last four years to Clarke Covington, the Space Station Projects Manager at the Johnson Space Center, was one of eight federal employees from the Houston area honored at the luncheon.

The award, which cited Shirley's outstanding performance and professionalism, was presented by Gerald D. Griffin, President of the Houston Chamber of Commerce and former Director of the Johnson Space Center.

"Mrs. Shirley is an outstanding example of a truly professional secretary who takes great pride in her work and who is highly thought of not only at JSC but by space station managers throughout NASA," Covington said.

Shirley was born in Baytown and is a graduate of Robert E. Lee High School. She and her husband Mike, who recently completed a term as President of the Baytown Lions Club, have three daughters--Angie, a freshman at Lee, Barbi, a sixth grader at Gentry Junior School and Candi, a fifth grader at Crockett Elementary. Her parents, Roy and Vera Belle Goodson, also reside in Baytown.

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AC 713 483-5111

For Release

September 14, 1987

Terry White
RELEASE NO. 87-042

NASA SELECTS RCA FOR SCIENCE SPACE PAYLOADS CONTRACT

The NASA Johnson Space Center, Houston, has selected RCA Government Services of Cherry Hill, New Jersey for negotiations leading to award of a contract covering science payloads development, engineering and operations.

The contract, with a proposed cost of \$46 million over a five-year period, will be a follow-on to a current RCA research and development contract with the Center. The contract will start November 1, 1987 and run through October 31, 1992.

Under terms of the new contract, RCA will be responsible for Space Shuttle and Space Station science payload engineering, integration, planning, technical management, operational support and equipment acquisition. Dedicated and carry-on payloads aboard manned and man-tended missions are covered by the contract.

Other bidders were Lockheed Engineering and Management Services Company, Inc., Boeing Aerospace Operations, Northrop Services, Inc., and Systems Management and Engineering Corporation, all of Houston; and Grumman Technical Services, Inc., Titusville, Florida.

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AC 713 483-5111

Jack Riley
RELEASE NO. 87-043

For Release
September 15, 1987

STS-27 CREW NAMED

NASA today announced five crewmembers for STS-27, a Department of Defense Space Shuttle mission targeted for early fall 1988, aboard the orbiter Atlantis.

They are: Robert L. Gibson (Cdr., USN), commander; Guy S. Gardner (Lt. Col., USAF), pilot; and mission specialists Richard M. Mullane (Col., USAF), Jerry L. Ross (Lt. Col., USAF) and William M. Shepherd, (Cdr., USN).

Gibson was pilot of STS-41B in February 1984, and commander of STS-61C in January 1986. He was born October 30, 1946, in Cooperstown, NY, but considers Lakewood, CA, his hometown.

STS-27 will be Gardner's first space flight. He was born January 6, 1948, in Alta Vista, VA, but considers Alexandria, VA, his hometown.

Mullane flew as a mission specialist on STS-41D in August 1984. He was born September 10, 1945, in Wichita Falls, TX, but calls Albuquerque, NM, his hometown.

Ross was a mission specialist on STS-61B in November 1985. He was born January 20, 1948, in Crown Point, IN.

Shepherd will be making his first space flight. He was born July 26, 1949, in Oak Ridge, TN.

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For Release

Kyle Herring
RELEASE NO. 87-044

September 25, 1987

WARD NAMED DEPUTY DIRECTOR OF PUBLIC AFFAIRS

Douglas K. Ward has been named Deputy Director of Public Affairs at the Johnson Space Center effective Monday, Sept. 28. He has been Chief of the Media Services Branch at JSC since January 1985.

In making the announcement, Harold S. Stall, director of public affairs, said that John E. Riley, Deputy Chief of Media Services, will serve as acting chief of the branch pending the selection of Ward's replacement.

In his new position, Ward will assist the Director of Public Affairs in the development of public affairs plans, policies and procedures, and will exercise direct supervision through channels of the activities of the Media Services and Public Services Branches.

Ward, a native of Idaho Falls, ID, received a bachelor of arts degree in political science in 1964 from the University of Colorado. From 1964 to 1966, Ward was a news writer and editor for the U.S. Information Agency, Voice of America, in Washington, D.C. before joining NASA at the Johnson Space Center as a public information specialist. He served as a mission commentator until 1972 when he was named Audio Visual Manager for the Public Affairs Office. From 1979 to 1981, he served as Assistant Executive Officer in the Office of the Administrator at NASA Headquarters. Ward returned to JSC in 1981 where he served as Deputy Director of Public Affairs until 1985.

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AC 713 483-5111

For Release

Kyle Herring
RELEASE NO. 87-045

October 13, 1987
3:00 pm CDT

NASA SELECTS ENGINEERING SUPPORT CONTRACTOR AT JSC

The National Aeronautics and Space Administration has selected Brown & Root Services Corp., Houston, for negotiations leading to award of a contract for Engineering Support Services at the Johnson Space Center.

The cost-plus-award-fee contract is estimated at \$11.7 million for the five-year performance period beginning Dec. 1.

Under terms of the agreement, Brown & Root Services will provide engineering support services including facilities engineering and design related to planning, design, development, construction, modification and repair of facilities, including test facilities, process equipment and other systems.

The contract also provides for technical documentation and specifications; inspection and quality control services for the construction, modification and repair of facilities; and modification of space simulation systems and research equipment and designs.

Work will be performed at the Johnson Space Center and at Ellington Field.

Proposals also were submitted by C.A.P., Houston; Holste & Associates, Houston; Pan Am World Services, Cape Canaveral, Fla.; TCB Project Management, Houston, and Williams-Russell & Johnson, Atlanta, Ga.

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NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center
Houston, Texas 77058
AC 713 483-5111

For Release

October 20, 1987

Brian Welch
RELEASE NO. 87-046

BOLDEN, GREENE ASSUME NEW DUTIES

Two veteran managers have assumed new positions at the Johnson Space Center.

Astronaut Charles F. Bolden Jr., Chief of the Safety Division at the Johnson Space Center, has been named lead astronaut for vehicle test and checkout at the Kennedy Space Center, Florida. As lead for the Astronaut Office's Vehicle Integration Test Team, Bolden will continue to be stationed in Houston but will work closely with Space Shuttle Orbiter processing personnel at KSC.

Jay H. Greene, a former Space Shuttle Flight Director, will succeed Bolden as Chief of the Safety Division. Both assignments are effective immediately.

Bolden, a Colonel in the U.S. Marine Corps, was selected as an astronaut candidate in May 1980. He served as pilot on STS 61-C in January 1986 and has logged 146 hours in space. His other assignments have included Astronaut Office Safety Officer, Technical Assistant to the Director of Flight Crew Operations, Special Assistant to the Director of JSC and Astronaut Office liaison to the Safety, Reliability and Quality Assurance Directorate at the Marshall Space Flight Center. Bolden was named Chief of the Safety Division at JSC in March 1987.

Greene's most recent assignment was as coordinator for the mission analysis aspects of JSC's contributions to Dr. Sally K. Ride's recent report, "Leadership and America's Future in Space." Prior to that, Greene was a Space Shuttle flight director from 1982 to 1987. He served as ascent flight director for seven Shuttle missions, and as lead flight director for the STS 41-C Solar Max repair flight, the STS 51-I Leasat salvage mission, and for STS 61-C. From 1980 to 1982, Greene was Chief of the Mission Operations Branch. He also served as a flight dynamics officer in Mission Control for several Apollo and Shuttle flights.

-more-

During his tenure as Chief of the Safety Division, Bolden supervised a major reorganization and helped reshape the focus of the division, according to Charles Harlan, JSC Director of Safety, Reliability and Quality Assurance.

"Charlie has provided strong leadership in the reorganization of the division at the same time as the focus of the organization moved more toward a disciplined systems safety engineering process," Harlan said. "He has really provided some inspirational leadership for the folks in that division and we expect that Jay Greene will pick up right where Charlie left off."

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Lyndon B. Johnson Space Center

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For Release

Steve Nesbitt
RELEASE NO. 87-047

October 16, 1987

STS-26 ASTRONAUT CREW TO PARTICIPATE IN 56-HOUR SIMULATION

The astronaut crew for the first post-Challenger Space Shuttle flight, STS-26, will participate Oct. 20-22 in a 56-hour simulation at the Johnson Space Center in Houston.

The practice in which the astronaut crew will "fly" the Shuttle Mission Simulator in Bldg. 5 at JSC and flight control teams will operate from the Mission Control Center begins at approximately 9 a.m. Oct. 20 with a simulated launch. The simulation is scheduled to conclude at approximately 5 p.m. Oct. 22.

Astronauts Frederick H. Hauck, commander; Richard O. Covey, pilot; and mission specialists John M. Lounge, George D. Nelson and David C. Hilmers will remain in the simulator during scheduled crew wake times, but return home during the crew sleep period.

The primary payload on STS-26 is the Tracking and Data Relay Satellite.

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NASA News

National Aeronautics and
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Lyndon B. Johnson Space Center

Houston, Texas 77058

AC 713 483-5111

For Release:

Terry White
RELEASE NO: 87-048

November 16, 1987

JSC SCIENTISTS GIVE PAPER ON SOIL SUPPLEMENTS AT AGRICULTURAL SCIENCE ANNUAL MEETING

Three scientists with the NASA Johnson Space Center's Solar System Exploration Division will present a paper on a potential soil supplement technology at the November 29-December 4, 1987 joint meeting of the American Society of Agronomy, Crop Science Society of America, and the Soil Science Society of America.

Douglas W. Ming, Donald L. Henninger and Gary E. Lofgren are co-authors of a paper, "Ion Exchange Selectivities of Essential Plant Nutrient Cations in Clinoptilolite," to be delivered at the Atlanta, Georgia meeting.

Clinoptilolite is a soft, absorptive mineral in the zeolite group that the three believe may have potential as a carrier of nutritive mineral supplements for greenhouse plants and house-plant potting soils. The mineral is abundant in the western United States and is easily saturated with potassium and ammonium, and to a lesser degree with calcium, manganese, iron, zinc, magnesium and copper.

Other zeolites are used as carriers for animal food supplements, insecticides, herbicides and fungicides, but further research is needed before using clinoptilolite as a nutrient carrier.

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Houston, Texas 77058
AC 713 483-5111

For Release

Billie Deason
RELEASE NO. 87-049

Oct. 28, 1987

SPACE STATION SHOWER PROTOTYPE DEVELOPED AT JSC

Something most of us take for granted--a daily shower--will be readily available to Space Station astronauts as a result of engineering research completed recently at the Johnson Space Center.

Rafael Garcia of JSC's Man-Systems Division has been developing hardware for a Space Station zero-g shower since 1985. Garcia spent three months collecting early shower technology data from Langley Research Center and Marshall Space Flight Center. Most of the Skylab shower hardware from the mid-1970s was retrieved from the Smithsonian Institute and returned to JSC for study.

Skylab missions were the first real opportunity for engineers and astronauts to try out personal hygiene hardware and procedures more like those used on Earth. The Skylab shower worked well, but sponge baths were the mainstay for personal hygiene on those missions. Skylab IV commander Jerry Carr said, "We could have a shower once every 10 days limited to 3 liters of water. Even though the entire procedure took about 45 minutes, it was worth it. It was really nice to get all slogged up with water." Space Shuttle crews must make do with sponge baths for their short-duration missions. Space Station crew members may take a shower every other day.

Space Station planners are working to provide the most comfortable, home-like accommodations possible for the crew. Yet all the creature comforts must operate simply and use a minimum of consumable resources. The prototype shower design stressed anthropometric measurements, limited space on the Station, and the need to recycle water as primary considerations.

The first tests of the prototype shower hardware were conducted in 1986. Laboratory testing was accomplished in an opaque fiberglass shower enclosure. Technical Services Division built the plexiglas model of the shower for use in KC-135 tests. The plexiglas version allowed photographers to document both the hardware in use and the test subjects as they showered. Garcia developed procedures and a testing program, test subjects were recruited, then data and comments were accumulated.

"The best comments I received were from female, non-technical test subjects," Garcia said. The first vacuum nozzle that Garcia himself designed worked poorly during early tests. One of the female test subjects offered a suggestion "that sounded like it couldn't possibly work from an engineering viewpoint," said Garcia. Co-op student Cheryl Jakub, then a third-year mechanical engineering student at Purdue, designed the nozzle exactly as suggested. "It worked great and we're still using that design," Garcia said.

Once inside the shower enclosure, the test subject adjusts circulating air temperature and water temperature. The subject washes one part of the body at a time. A spray nozzle with a squeeze lever on the side directs water onto a wash cloth or directly onto the body. After lathering, the subject vacuums both soap and water from the skin, then uses the wet wash cloth to rinse. Shampooing the hair follows the same basic steps. When the shower is complete, the subject vacuums the sides and bottom of the shower enclosure, then dries the interior with a towel.

The mixture of water and air vacuumed from the body and from the shower enclosure is moved in a circular motion into the cylinder of a vortex separator. The circular motion creates centrifugal force that pushes water to the outside of the cylinder, leaving air in the middle. Water is drawn down into the cone of the separator by static pressure and a pump. Air is removed from the cylinder through the top using suction from a blower and is circulated back into the shower enclosure.

Soap used on Shuttle flights was found to produce too little lather. During early shower tests, subjects used several times the amount of soap needed for cleaning. Excess soap was difficult to rinse from the body, left skin sticky and overloaded the shower separator system. Paste and liquid soap products evolved as the final candidates of a development contract with Economics Laboratory of Minneapolis-St. Paul and were evaluated during another seven-week test. Products being considered for use contain only three or four ingredients compared with 17 or 18 in most commercial bath soaps and shampoos. Candidate products rinse from the skin and hair more easily and clean more efficiently. Since water in the space Station will be recycled, fewer chemicals put into it will simplify the recycling process.

Subjects who participated in the test program were briefed on the use of equipment and showering procedures. All subjects shampooed their hair and females also shaved their legs and underarms as part of the test. From data on more than 500 showers, the average water usage is .83 gallons per shower.

Data consistently reveal the same results in all tests: females use less water, more soap and less time in the shower; males use more water, less soap and more time.

JSC's Crew and Thermal Systems Division personnel are working on water reclamation technology for Space Station, and assisted Garcia's project by recycling used shower water. In 10-week tests using water recycled up to four times, shower test subjects could not detect any difference in the water.

"It was a real learning process for me about how water reclamation works," Garcia said. Five different systems of reclamation are being evaluated for Space Station. Reverse osmosis and multifiltration processes were used for the shower water tests.

Microbiologist Duane Pierson and Dick Sauer of the Medical Sciences Division developed disinfection techniques for the shower. Biomedical Laboratories Branch personnel also collected data on microbial and biofilm contamination in the shower enclosure and plumbing.

"The entire project depended on the support of other divisions and centers. Cooperation was excellent. Everyone worked well together to meet the test schedule," Garcia said.

The most difficult yardstick for both hardware and test subjects was on the KC-135 zero-g aircraft. During three days of parabolic flights, the entire shower system was evaluated. In fewer than 10 parabolas, all mechanical equipment checked out. Two test subjects then took complete showers, and one subject shampooed her hair. Both reported that the shower worked very well, but more work is required to clean the shower in zero-g than in the JSC lab.

"All the human interfaces worked as designed. We need to do some fine tuning on the separator, but the KC-135 tests proved that the hardware will operate in zero-g conditions," Garcia said.

To control contamination of the closed loop life support system, further development work remains to be done on problems of microbial and biofilm growth and cleaning procedures. Biofilm is caused by growing microbes that attach themselves to drain pipe surfaces. Microbes create polymers which provide places for more microbial growth and a film that actually protects them from biocides and disinfectants. Biofilm can cause numerous problems ranging from plumbing corrosion to potential health hazards.

Tests of the zero-g whole body shower system officially end in October 1987. A final report is scheduled for release in February 1988 for use by the Space Station environmental control system prime contractor. All data collected during the project and all hardware developed for the tests will be available to the contractor.

"Of course, the final design may be modified or improved. All candidate designs that work will be considered for the actual Space Station whole body shower," Garcia said.

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Houston, Texas 77058
AC 713 483-5111

For Release
October 30, 1987
2:00 pm CST

Terry White
RELEASE NO. 87-050

NASA SIGNS SCIENCE PAYLOADS CONTRACT WITH RCA

The NASA Johnson Space Center, Houston, Texas has signed a cost-plus-award fee contract with RCA Government Services of Houston, a subsidiary of General Electric, for science payloads development, engineering and operations.

The initial 3-year contract starts November 1, 1987 and has an estimated value of \$45,923,000. An optional 2-year extension (November 1, 1990 to October 31, 1992) has an estimated value of \$33,784,000, for a combined 5-year value of \$79,707,000.

Space Shuttle and Space Station scientific payloads engineering, integration, hardware acquisition and operations support are covered by the contract.

Other bidders were Boeing Aerospace Operations, Lockheed Engineering and Management Services Company, Inc., Northrop Services, Inc., and Systems Management and Engineering Corporation, all of Houston; and Grumman Technical Services, Inc., Titusville, Florida.

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AC 713 483-5111

For Release

Billie Deason
RELEASE NO. 87-051

November 6, 1987

CONSTRUCTION OF CENTRAL COMPUTING FACILITY UNDERWAY AT JSC

Construction of a Central Computing Facility designed to keep the Johnson Space Center at the forefront of computer technology in the Space Station era began recently under a \$5.672 million construction contract awarded to Cahaba Construction Co. of Houston.

The computer building will be the first major facility constructed at JSC since 1971. The structure will house computer systems with a projected value of \$88 million dedicated to both Space Shuttle and Space Station programs. The new building will provide a higher level of computer security to protect critical Space Shuttle software processing systems and will provide for growth of JSC computer systems that cannot be accommodated in existing facilities.

The building is designed to allow for expansion of the facility to 126,000 square feet to accommodate future data processing requirements. The building will also support hardware in the super computer class.

The three-story steel-framed building will have 66,800 square feet of floor space located on Second Street between buildings 45 and 47, and will be numbered building 46. There will be office space for 30 employees as well as tape libraries and operations support areas.

The building is expected to be completed in October 1988.

Also bidding for the construction contract were: Tellepsen Corp.; Lebeo Construction, Inc.; Baxter Construction Co., Inc.; Valcon III, Inc.; Lawson-Avila Construction Inc.; W. S. Bellows Construction Corp.; and Robert E. McKee, Inc.; all of Houston, Texas.

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For Release

Kyle Herring
RELEASE NO. 87-52

Nov. 10, 1987

RILEY NAMED JSC MEDIA SERVICES BRANCH CHIEF

John E. Riley has been named Chief of the Media Services Branch, Office of Public Affairs, at the Johnson Space Center, Houston, effective Nov. 22. He has served as deputy branch chief since 1981.

As chief of the branch, Riley is responsible for planning, developing, directing and supervising programs designed to disseminate information about JSC to the news media. He replaces Douglas K. Ward who was recently named Deputy Director of Public Affairs at JSC.

Riley, a native of Trenton, MO., has a bachelor of science degree in journalism from the University of Kansas. He has served in the JSC Public Affairs Office since 1963 with increasing degrees of responsibility. From 1963 to 1977, Riley was the public affairs representative to the Gemini and Apollo Program Offices, Flight Crew Operations and Flight Operations Directorates, and the Apollo-Soyuz Test Project. From 1978 to 1981, he was executive assistant to the Director of Public Affairs. He also has served as a mission commentator for the Gemini, Apollo, Skylab and Space Shuttle programs.

Prior to his NASA experience, Riley served in the U.S. Navy and worked as a reporter and editor of several newspapers in Kansas, Ohio and Missouri. Immediately prior to joining NASA, he worked as a public relations representative with General Dynamics Astronautics in San Diego, CA.

While with NASA, Riley has received the JSC Superior Achievement Award and the NASA Exceptional Service Medal.

Riley and his wife, the former Patricia C. Pray of Kansas City, KS, reside in La Porte, TX. They have five children.

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AC 713 483-5111

Brian Welch
Release No. 87-053

For Release
November 23, 1987

PUDDY NAMED DIRECTOR OF FLIGHT CREW OPERATIONS

Donald R. Puddy has been appointed Director of the Flight Crew Operations Directorate (FCOD) at the Johnson Space Center. The assignment is effective immediately.

Puddy will replace George W.S. Abbey, who is being reassigned as Special Assistant to Center Director Aaron Cohen.

Puddy has been detailed to NASA Headquarters in Washington, D.C. since January 1987 serving as Assistant Associate Administrator for Space Flight. He will report to JSC in the next few weeks after completing several assignments in Washington, Cohen said. In the interim, FCOD Deputy Director Henry W. Hartsfield Jr. will serve as Acting Director.

Puddy joined NASA at JSC in 1964 as a flight controller monitoring Lunar Module systems for the Apollo Program. In 1966, he was named head of the Lunar Module Systems Section, Lunar Module Systems Branch. Three years later, he was named assistant chief of the branch and served as the lead controller for all Lunar Module life support and communications systems during the Apollo 9, 10 and 11 missions.

In the early 1970s, he transitioned from flight controller to flight director and served as lead for the launch of the unmanned Skylab orbital workshop in 1973 and as flight director for all three manned missions to the laboratory.

In 1974, he was named Chief of the Mission Operations Branch and served as a flight director for the Apollo-Soyuz Test Project. In 1976 and 1977, he served as lead flight director for the Approach and Landing Tests with the Shuttle Orbiter Enterprise, and in 1978 was named a flight director for the first orbital mission of the Shuttle, STS-1. He also served as a flight director for STS-2.

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From 1982 to 1985, Puddy was Chief of the Mission Operations Systems Division, responsible for the preparation and conduct of all Space Shuttle systems and systems-related experiments. From 1985 to 1986, he was Assistant Director for Systems in the Mission Operations Directorate.

Puddy was selected as Acting Deputy Director of the Ames Research Center in 1986 before being detailed to NASA Headquarters.

He earned his bachelor of science in mechanical engineering from the University of Oklahoma in 1960 and a master of business administration from the University of Houston-Clear Lake in 1978. Puddy's numerous honors and awards include the Presidential Medal of Freedom for his work on Apollo 13, and three NASA Exceptional Service Medals.

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For Release

Steve Nesbitt
RELEASE NO. 87-054

December 10, 1987

MISSION CONTROL TEAM TO PRACTICE EMERGENCY DEPLOYMENT

A handful of NASA flight controllers Monday will crate up their computers and board a NASA aircraft to test how an emergency mission control team would function if the real Mission Control Center could not operate.

Although the building which houses Mission Control in Houston is designed to weather most storms and has its own emergency power supply, it is possible that a severe hurricane or other event could make it inoperable - unable to process data, resolve problems or speak to the crew of a space shuttle in flight.

In such an event, a group of about 14 flight controllers would deploy to the NASA White Sands Ground Terminal (WSGT), the facility in New Mexico which receives data from the Tracking and Data Relay Satellite (TDRS), and set up a temporary control center.

WSGT is the closest facility which could be used as a backup control center and receives its space shuttle flight data directly from the TDRS.

Two emergency teams will be designated for each Space Shuttle flight, made up of flight controllers working that mission.

In Monday's simulation, an imaginary severe hurricane will be about to make landfall at Galveston Bay. The designated emergency team of 14 flight controllers and three support personnel will leave Ellington Field at 7 a.m. aboard NASA's KC-135.

The group, carrying three sophisticated data processing computers, will arrive at Holloman Air Force Base near Alamogordo, NM about 8:40 a.m. Central Standard Time and board U.S. Army helicopters. About one half-hour later team members will arrive at the White Sands Ground Terminal.

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During the transition, should the Houston Mission Control Center fail to operate, personnel at the White Sands facility can talk to the Space Shuttle crew.

After the emergency team begins operating, it will be linked with the Shuttle Mission Simulator in Houston and with other facilities including Kennedy Space Center, Florida, the Goddard Space Flight Center in Maryland and the Rockwell facility in California which will provide trend monitoring and data analysis support.

The first portion of the simulation will test the team's ability to support continuing orbit operations and to recognize and work to solve malfunctions. The latter part will be a simulated deorbit of the Space Shuttle.

The purpose of the exercise, according to Flight Director Granvil A. Pennington who will lead the control team, is to verify the time required to deploy and fully man an emergency mission control center and to demonstrate the team's ability to conduct on-orbit operations and deorbit.

The team will return to Houston Tuesday.

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For Release
December 23, 1987

Jeffrey Carr
RELEASE NO. 87-055

JSC AWARDS SHUTTLE TRAINING AIRCRAFT AVIONICS SUPPORT CONTRACT

The NASA Lyndon B. Johnson Space Center is entering into a contract with Ford Aerospace and Communications Corporation for Shuttle Training Aircraft (STA) advanced digital avionics systems support at Ellington Field, near JSC effective January 1, 1988.

The cost-plus-fixed-fee contract is estimated at \$11.75 million for the basic contract period of 2 years. Also included are three 1-year options which could extend the completion date to December 31, 1992 and increase the total estimated cost to approximately \$28.5 million.

The contract was awarded noncompetitively.

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For Release

December 23, 1987

Kelly Humphries
Release No. 87-056

INVESTIGATION COMMITTEE TO EXAMINE ELLINGTON RUNWAY INCIDENT

Astronaut S. David Griggs has been appointed chairman of an incident investigation committee that will examine the Dec. 17 landing of a NASA high-altitude research aircraft that ran off a runway at Ellington Field in Houston.

Also on the committee are Steven J. Feaster, pilot representative; Glenn O. Pingry, maintenance representative; Harry A. Drottz, quality assurance representative; and David L. Mumme, aviation safety officer. Daniel L. Clem of the Safety, Reliability and Quality Assurance Directorate's Safety Division, will assist the committee.

The incident occurred at 1 p.m. CST Thursday, Dec. 17. The aircraft, a General Dynamics WB-57F, was piloted by Michael Corbett and Albert Crews, both Aircraft Operations Division pilots. Corbett was flying the aircraft at the time of the incident. No one was injured, and damage to the aircraft was minimal.

The NASA WB-57 is associated with Project Airstream, a long-term NASA/Department of Energy multidisciplinary study of the upper atmosphere and also is used to collect "cosmic dust" samples for the Solar System Exploration Division at JSC.

The WB-57F NASA 928 Incident Investigation Committee has been directed to report its findings to JSC Director Aaron Cohen by Jan. 31, 1988.

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For Release

Steve Nesbitt
RELEASE NO. 87-057

December 23, 1987

NASA, MCDONNELL DOUGLAS SIGN ANALYSIS SUPPORT CONTRACT

The NASA Johnson Space Center has signed a contract with McDonnell Douglas Astronautics Company to provide Space Shuttle mission planning and analysis support.

Estimated cost of the basic one-year contract is \$18,743,808. The contract includes an option to increase the effort during the year by \$8,603,000, making the one-year total \$27,373,808.

Four one-year priced option extensions, if exercised, could extend the contract through December 13, 1992, and increase the total amount of the contract to \$134,086,288.

The work will be performed primarily in Houston and involves approximately 200 contractor personnel.

The competitive procurement was held under formal source evaluation board procedures.

The unsuccessful offeror was a team headed by Unisys Corporation, Houston, and its subcontractors TRW and Barrios Technology, both with Houston offices, and Abacus Programming Corp. of Van Nuys, Calif.

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For Release

December 28, 1987

Kyle Herring
RELEASE NO. 87-059

NASA SELECTS IBM FEDERAL SYSTEMS FOR SIMULATOR SUPPORT CONTRACT

NASA today issued a letter contract to IBM Federal Systems Division to provide General Purpose Computers and auxiliary equipment for use at the Johnson Space Center.

The contract calls for IBM to provide the computers and equipment for use in the Space Shuttle Mission Simulator and support facilities. Estimated total price of the definitive contract, which runs through September 1994, is \$24.6 million.

All work under the noncompetitive contract will be performed at IBM's facilities in Houston, TX.